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ABSTRACT

The planning, design, development and field testing of an instructional system for the training of educational disseminators/evaluators who are named "Educational Information Consultants" is reported. A modular training program is described covering the acquisition of knowledge, skills, and attitudes required to perform effectively in disseminating education information in various settings. Training materials and course sequences are focused on five processes: negotiation of a client's problem, retrieval of Research and Development information, transformation of retrieved information, communication of the above processes, and assessment of effectiveness. Course and performance objectives are presented. This thirty-class-hours training system has been developed and field tested as a self-contained, performance-oriented course containing lesson plans, exercises, readings, media, tests and instructor inputs. Three field tests of the course are described. Results of pretest-posttest comparisons for each of the above processes as well as for the overall course indicate the effectiveness of this training program in educational settings and information centers in preparing educational dissemination personnel. (Author)

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Final Report

Project No. 0-9049
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DESIGN, DEVELOPMENT AND VALIDATION OF A TRANSPORTABLE INSTRUCTIONAL SYSTEM FOR THE TRAINING OF EDUCATIONAL DIFFUSION/EVALUATION PERSONNEL

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July 31, 1971

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U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Office of Education

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Bela H. Banathy
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I. INTRODUCTION

A. STATEMENT OF THE PROBLEM

During the past decade, major strides have been made in creating educational information services and in bringing these services to the attention of a large and growing user population. The U.S. Office of Education has played a major role in these developments, particularly through the instrumentality of the ERIC data storage system. The growth of the ERIC Clearinghouses and of the various state and local educational information networks has sharpened awareness in the national educational community of the value of current and comprehensive information services. This in turn has increased the demand for such services. More and more educators are aware of the need to be appraised of noteworthy and tested practices throughout the country, in order to develop more broadly based programs of educational planning, implementation, and evaluation.

That there is a corresponding need for people skilled in the various service functions which information networks perform is almost self-evident. As Havelock (1971) has pointed out, ". . . what we do not have and what we need so badly is a network of regional centres which can serve as truly comprehensive resource centres and resource linking centres with the skills and staff to be an effective mediating mechanism between R & D on the one hand and operating school districts on the other."

Increasing the number of centers, resources, and persons working effectively in them makes possible better utilization of current knowledge and research about innovations and fresh attacks on old problems.

Viable training programs for persons in such specialized tasks have not been readily available, however.

B. RATIONALE FOR THE PROJECT

Although curricula and educational practices in public schools have noticeably improved in the last decade, it is also clear that many of the innovative developments and practices have not been widely adopted. The reason for this is complex:

1. The dynamics of the educational process (like the society which it mirrors) now produce problems of such intensity and frequency that needs for accurate, concise, and relevant information must be met.
2. Much of the information about new educational developments does not exist in forms which are easily retrievable, intelligible, and applicable for school personnel.
3. Schools do not now provide skills and arrangements required to apply and to make fully effective use of existing resources and information.
4. There is only a partially effective information network among persons functioning in diffusion/dissemination roles and there are inadequate numbers of personnel trained for such roles.

In 1941, Mort and Cornell found that it took 50 years for a practical educational innovation, kindergarten, to become widely adopted. Since that time, while that specific figure has been questioned (Brickell 1961, Knapp 1959), no one has yet disputed the fact that it takes too long for sound educational innovations to become widespread in the schools.

Educational investigators have studied the phenomenon, in the hopes of explaining it and thereby suggesting ways to alleviate it. The works of Carlson (1965), Miles (1964), Rogers (1962), Havelock (1969, 1967), and Guba (1965) are most relevant. They point out that the problem of diffusion of educational innovations is also a communication problem, a matter for communication researchers and information scientists.

Carlson postulates three barriers to change in the education system: (a) the absence of a change agent in the school structure, (b) a weak knowledge base about educational innovations, and (c) the "domestication" of the public school, meaning lack of accountability. Rogers postulates, as a result of his synthesis of diffusion of innovation in a variety of fields, that there are five stages in the adoption process: awareness, interest, evaluation, trial, and finally adoption. This scheme implies that information about the innovation at various levels of detail is a sine qua non to move users towards the final adoption decision. Rogers calls it the "communicability" of the innovation. Havelock (1967, 1969) makes the case that in order to speed the process of diffusion of innovations, a "linker," charged with the responsibility of bridging the gap between research and practice, must be instituted. This seems to be what Carlson refers to as a change agent. Havelock (1967, 1969), Guba (1965), and Farr (1969) reject the notion that the schools have the ability to assemble and use information directly from research. According to these investigators, the role of the "linker" is one of ". . . gathering, processing, and distribution of educational knowledge." Guba states that "some agency must be concerned with communicating the results of development activity back to the practitioner." A recent survey sponsored by USOE (National Center for Educational Research and Development, 1969) reported that ". . . generally [the school administrator] is in no position to dig deeply into the literature, so . . . he needs to have a great deal of work done for him in the preparation of information." They point out the ". . . need for a kind of high-level journalism which brings the most significant facets of the research effort into non-technical form, both informative and attractive." Former Commissioner of Education James Allen (1969) also pointed out that "our first goal must be to get the good, new ideas and practices into use . . . and get them there quickly . . . [in the past, much of what] we have laboriously learned about educational theory and practice has been, to say the least, under-advertised, poorly packaged and thinly distributed."

A number of studies and surveys conducted by the Communication Program of the Far West Laboratory have focused on the nature and extent of these needs. For example, Communication and utilization study (Lockheed, 1967) confirmed that many school personnel are skeptical of the present efforts of educational research and development (R and D). The Communication Program's experience with testing prototypes of information systems substantiates the belief that educational personnel do not have adequate information about new developments. Surveys (Hood and Hayes, 1967; Chorness, Rittenhouse, and Heald, 1969a, 1969b; York, 1969), staff studies (Coney, Plaskett, Roggenbuck, and Hood, 1968; Mosher, 1969; Carlisle, 1968), and field testing of school planning and evaluation activities (Campbell and Markle, 1968; Hood, Carlisle, and Whitney, 1970) conducted by the Communication Program support the conclusion that most school organizations and personnel are poorly prepared to perceive, process, evaluate, and utilize R and D information.

C. STATEMENT OF PURPOSE

Responding to the need briefly stated above, the U.S. Office of Education, Research Training Branch, funded the proposal of the Far West Laboratory for Educational Research and Development for the project reported in this paper. This project proposed to design and develop an instructional system for the training of educational disseminators/-evaluators. The program* includes both prescribed content and instructional aids and accessories in a coordinated, integrated instructional system. Components of this system were identified as objectives, learning tasks and activities, instructional material and instructors, media, and evaluation devices.

The overall goal of the project was to develop training for personnel who would help to speed and make more effective the linkage between resources and school users of educational information. Such personnel would be trained to provide linkage services and would be able to staff effectively positions in the expanding educational resource center network. The objective of the training, then, is to prepare personnel competent in information linking skills, including: (a) identification of user needs, (b) retrieval of information on educational products and programs related to specific user needs, (c) dissemination of such information to the user/practitioner, and (d) assistance to the practitioner in making effective use of the information.

A secondary objective of the project was to prepare a training system in which the primary instructional mode was active student participation in problem-solving tasks and activities, supplemented by instructor management and appropriate written technical information and guideline material. The system was to be in a sufficiently flexible form for application in a variety of training contexts and environments.

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*The terms "instructional system," "training program," "program," and "training" are used interchangeably throughout this report.

D. TARGET AUDIENCE

Development of a training program to achieve the above project goals assumes that there is at least one individual in each educational agency who needs the knowledge, attitudes, and skills to make effective use of outside informational sources. This individual needs to be able to convey, with considerable expertise, relevant and useful information to others in his agency.

A prospective trainee, however, should meet some minimal qualifications. He should be professionally mature to the extent that colleagues see him as "capable" in at least one role, e.g., a supervisor of some instructional service or department, the principal of a building, an agency-wide consultant for a subject or instructional area, or the administrator of an instructional program of some scope. He should be involved, in either a current or a future position, in educational information dissemination or utilization activities at a school building, district office, county, regional, or state level. Persons meeting this qualification might, for example, include a school principal or teacher specially assigned to information linkage activities, an information services specialist or assistant, a research analyst, a librarian, information specialist, or subject area consultant.

It is desirable, perhaps necessary, that the trainee have confidence and competence as an educator, but not necessarily expertise in some special or narrow field. Rather than career commitment to a particular subject matter area, a "generalist" viewpoint would be more appropriate. Any administrative and knowledge utilization skills would be added strengths.

State, regional, county, or local educational agencies are sources of such personnel.

II. DESCRIPTION OF THE INSTRUCTIONAL SYSTEM

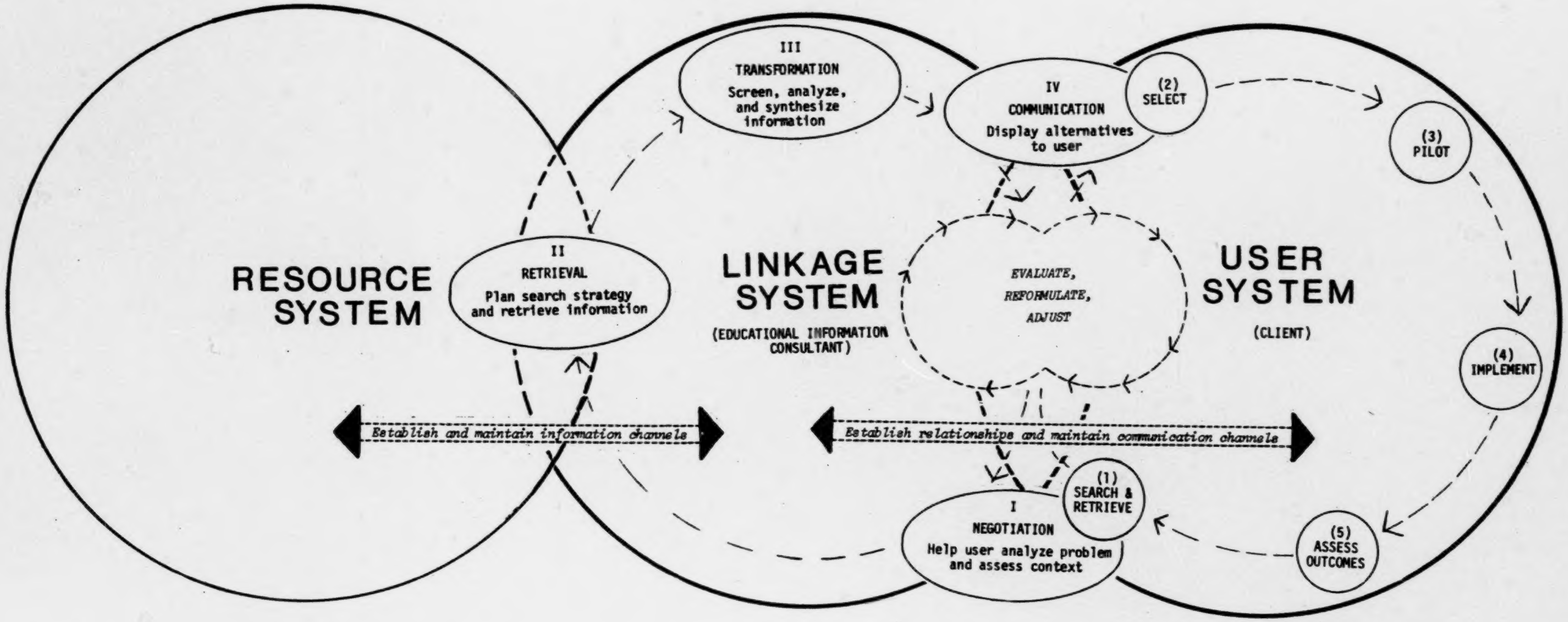
A. CONCEPTUAL BASIS

The instructional system is based on a conceptual model developed prior to design of any of the course materials. (See Figure 1, p. 9, "A Process Model of the Educational Information Consultant Role.") The focal point of the model is the Linkage System, a network of local, district, county, regional, and/or state educational information dissemination services, which connects sources of educational research and development (R and D) information with school personnel responsible for classroom practice. These sources of information are labelled the "Resource System" and the school personnel, the "User System." The agent who provides services at various levels within the Linkage System is the Educational Information Consultant or EIC. The EIC interacts with both Resource and User Systems.

In the model, both the Linkage System and the EIC are depicted as "responsive" to the User System--that is, linkage services are activated primarily by requests from clients needing assistance. Response to a client consists of a sequence of activities which the EIC performs. The EIC begins interaction with the User System when a client, seeking information to solve a problem, first contacts the EIC. The EIC, whether functioning at a local, district, county, regional, or state level, "responds" by helping the client to analyze, assess, and define specifically the problem and corresponding information need. This process is labelled Negotiation (see Figure 1, Step I in the Linkage System).

The next step, Retrieval, is a process through which the EIC

A PROCESS MODEL OF THE EDUCATIONAL INFORMATION CONSULTANT ROLE


RESOURCE SYSTEM
II
RETRIEVAL
Plan search strategy and retrieve information
III
TRANSFORMATION
Screen, analyze, and synthesize information
LINKAGE SYSTEM
(EDUCATIONAL INFORMATION CONSULTANT)
IV
COMMUNICATION
Display alternatives to user
EVALUATE, REFORMULATE, ADJUST
(2) SELECT
(3) PILOT
USER SYSTEM
(CLIENT)
(4) IMPLEMENT
(5) ASSESS OUTCOMES
(1) SEARCH & RETRIEVE
I
NEGOTIATION
Help user analyze problem and assess context
Establish and maintain information channels
Establish relationships and maintain communication channels

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interacts with the Resource System. After planning a strategy for locating information relevant to the client's problem, the EIC searches selected sources. Once pertinent information is retrieved from these sources, the EIC then moves into Step III, Transformation. This process is internal to the Linkage System. It requires that the EIC screen, organize, analyze, and/or synthesize the information retrieved until it is in a form which is "actionable." "Actionable" means that the information is compiled in a format and style appropriate for delivery to the client so that he can then use the information, with minimum effort, to solve his problem.

At Step IV, Communication, the EIC again interfaces with the User System. The EIC presents to the client a package of transformed information on the problem. Whether verbal or written, communication is the process which makes clear to the client the results of the EIC's search. Communication completes the linkage of Resource and User Systems.

Evaluation, Reformulation, and Adjustment, as presented in the model, are ongoing processes. Evaluation measures effectiveness on three dimensions: (1) the individual EIC's performance of each of the other four linkage processes; (2) the overall performance of the EIC role; and (3) the performance of the system setting in which the EIC functions. Evaluation is conducted to determine whether the Linkage System is successful in servicing the User System, in utilizing the Resource System, and in fulfilling the linkage functions. Reformulation and Adjustment introduce changes, implied by the findings of Evaluation, in linkage processes, functions, and modes of interaction with Resource and User Systems.

B. ORGANIZATION AND FORMAT

The instructional system developed to conform with this model is a thirty-hour training course entitled, "The Educational Information Consultant: Skills in Disseminating Educational Information." The course is organized in modules, ranging in length from three to six instructional hours. Each module builds, for its theme, on one of the five major processes of the EIC role. A definition of each process, as well as the order for and amount of instructional time allotted to the module, follows:

MODULE: 1 PROCESS: Negotiation INSTRUCTIONAL TIME: 20%

DEFINITION:
To identify, analyze, and define specifically the problem and attendant information needs of a client.

MODULE: 2 PROCESS: Retrieval INSTRUCTIONAL TIME: 20%

DEFINITION:
To develop a search strategy and locate, identify, and secure R and D information pertinent to the client's problem and request.

MODULE: 3 PROCESS: Transformation INSTRUCTIONAL TIME: 20%

DEFINITION:
To screen, analyze and/or synthesize, and organize the results of the search in a form appropriate for delivery to the client.

MODULE: 4 PROCESS: Communication INSTRUCTIONAL TIME: 15%

DEFINITION:
To display and convey the results of the search to the client in a style appropriate for his use in finding a solution(s) to the problem.

MODULE: 5 PROCESS: Evaluation INSTRUCTIONAL TIME: 10%*

DEFINITION:
To assess the performance of the major EIC processes and overall role and the operational effectiveness of the setting within the linkage system; reformulate based on evaluation and follow-up evidence; and make adjustments in processes and functions.

*The course also includes an introductory segment on the emerging role and functional contexts of the EIC and a concluding segment for trainee testing and feedback. The introduction accounts for another 10% of the instructional time and a conclusion accounts for the final 10%.

Actual instructional time totals 30 hours, including provisions for testing. This time is divided into 10 three-hour sessions which are suitable for daily or weekly class meetings. The meetings are spaced to permit the approximately two to four additional hours of outside individual preparation needed for each session. A course outline, listing the outside assignments, is provided in the copy of the trainee manual which accompanies this report.

C. INSTRUCTIONAL OBJECTIVES

A set of instructional objectives was developed to provide both instructor and trainees with a description of the types of knowledge, skills, and attitudes which can be acquired as a result of learning experiences in the course. These instructional objectives specify intended outcomes for trainees who successfully complete the course--that is, they state what trainees will be able to do at the end of instruction. There are three categories of instructional objectives: (1) knowledge, (2) affective, and (3) skill. The objectives in each category are identified in the sections below.

In addition, a set of related performance objectives was derived to permit precise measurement of the degree to which trainees achieve the instructional objectives. Because the list of performance objectives is too lengthy to include in its entirety, however, only illustrative samples are provided in the sections which follow.

1. Knowledge Objectives

By the end of the course, a trainee who has acquired the knowledge base essential to effective performance in the role of EIC will be able to:

a. Summarize research and theory on the interrelationship among educational resource, user, and linkage systems, particularly the dissemination mechanisms and networks which comprise such a linkage system.

b. Define the basic components of the EIC role.

c. Describe alternative functional contexts of the EIC role.

d. Compare the functional characteristics of libraries and information centers.

The following performance objective describes a behavior which, when demonstrated, would be one indicator of achievement of instructional objective (b) above:

> Given a list of 17 tasks, the trainee will choose the appropriate letter to indicate whether each task should (A) definitely, (B) only rarely, or (C) definitely not be performed by an EIC or his staff and will show a gain in total score correct between pretest and posttest.

2. Affective Objectives

Positive attitudinal response to the concept of, need for, and potential impact of the EIC role is a major goal of training. Accordingly, the instructional system is designed to encourage development of an affective state which is supportive of EIC functions and processes. By the end of the course, therefore, attitudes should be developed to the extent that the trainee will:

a. Accept the usefulness of the educational information consultant role as defined, at least to the point of being willing to try it.

b. Express commitment to the importance of helping schools improve opportunities for students to learn through use of well-tested research and development (R and D) information and products.

c. Express willingness to strive toward higher levels of performance in the knowledge and skills required to function effectively as an educational information consultant.

d. Accept the potential of the dissemination function for improving school operations.

Examples of related performance objectives which would indicate achievement of instructional objective (a) above include:

(i) On a five-point scale, with "1" being "not at all useful" and "5" being "very useful," the trainee will rate "4" or better when asked to indicate how personally useful is the subject matter covered in the course.

(ii) On a five-point scale, with "1" being definitely not useful and "5" being definitely useful, the trainee will rate "4" or better when asked to indicate whether the skills learned in the course are useful in his present or future position.

3. Skill Objectives

The ability to perform effectively and readily as an EIC is contingent on proficiency in the five major processes of negotiation, retrieval, transformation, communication, and evaluation. This proficiency, in turn, is based on ability to perform skills associated with and integral to each process. By the end of the course, a trainee who is acceptably proficient in a major process should demonstrate aptitude in each of the skills associated with that process at a specified level of competence. There are four different levels of competence:

Orientation--familiarity with the nature of the skill and its relationship to the major process.

Basic Skill--familiarity with the nature of the skill, as well as some ability to perform the skill, based on limited practice in applying it.

Competency--ability to perform the skill effectively, based on repeated applications of the skill in varying situations.

Expertise--competence in performing the skill and in teaching it to others.

Skill objectives and corresponding levels of competence are listed below according to major process.

Skill Objectives for the Negotiation Process

		Level of Competence*
1)	Ask questions about the client's problem which elicit information essential to a precise formulation of the search request.	C
2)	Guide interviews in order to: (a) interpret and clarify the client's information needs and (b) set priorities among them.	C
3)	Listen in order to comprehend fully and objectively what is said in formal and informal interchange with client(s).	C
4)	Communicate orally in order to develop rapport with the client.	S
5)	Conduct a client analysis, which includes making inferences as to the client's concerns, motivations, and level of expertise.	S
6)	Compose precise written and oral descriptions of the client's problem.	C
7)	Formulate a satisfactory contract with the client for the service(s) to be provided.	C
8)	Recognize whether the statement of the client's problem requires further clarification, analysis, or redefinition.	C

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*O = Orientation
S = Basic Skill
C = Competency
E = Expertise

Level of Competence

9) Question, discuss, and secure information from the client when there is a need to redefine or restate the problem. S

The following are statements of performance objectives related to negotiation. The number(s) in parentheses after each performance objective identifies the related instructional objective.

(i) As he listens to an eleven-minute tapescript of a simulated client-EIC interview to establish the parameters of a request for information, the trainee records the essential data for completing a search. A model report is provided by the program developers for the instructor's use in judging the adequacy of the student's reports. (6)

(ii) After listening to the simulation and recording the essential data, the trainee will identify the types of questions used by the EIC, describe the errors in EIC response to the client's statements, and summarize the agreement made in the interview. Model answers are provided by the program developers for the instructor's use in judging the adequacy of the students' responses. (3)

(iii) Given a partially vague request for information in a client-EIC role-playing situation (e.g., for "topical materials for flexible use in an interest-based secondary school social studies course"), the student asks questions which will serve to reduce the ambiguity of the request and elicit definition of terms without engendering resentment or defensiveness on the part of the client, such as:

(a) What are the learning goals which are to be particularly emphasized?

(b) Are the materials to be for student use or for teacher reference?

(c) By "flexible use," do you mean that the materials can be read at any time during the unit?

(d) Can you tell me anything further about behaviors which the instruction should elicit?

At least one "learner-observer" rates the adequacy of the trainee's questions on an Observer Rating Form provided by the program developers. Rating on a 5-point scale will be obtained with the criterion for adequacy being that the trainee receives a rating of at least "adequate" on 70% of the items. (1, 2, 4)

(iv) Provided model(s) of negotiation/interview intake forms and the assignment to devise his own intake form, the student will design such a form of no more than two pages in length, which, in the judgment of the instructor, is adequate for recording all needed information as judged against the model form provided by the program developers. (6)

Skill Objectives for the Retrieval Process

		Level of Competence
1)	Develop an efficient and comprehensive search plan on the basis of: (a) information obtained about the problem during negotiation with the client and (b) the characteristics of the resource system to be utilized.	c
2)	Conduct searches in various educational resource systems and information networks.	S
3)	Locate, select, and recover resources and products relevant to the particular client's request.	S
4)	Summarize accurately the contents of a document without reading it in detail.	S
5)	Keep records and establish and maintain filing systems.	O
6)	Recognize a need to modify or expand the search plan and procedures in order to accommodate for constraints imposed by the client, the EIC, or resource systems.	C

The following are examples of related performance objectives for retrieval:

(i) Given a statement of a hypothetical client problem and asked to list descriptors according to the ERIC Thesaurus which can be used to guide a search for information, the trainee will list at least four from a list of acceptable terms provided for this problem to the instructor. (1)

(ii) Given a list of five major steps involved in the process of retrieval, the trainee will match 13 out of 16 skills and activities with the appropriate major steps. (1, 2, 3)

(iii) Given several printouts of ERIC abstracts from the DIALOG information storage system, the student will assign the correct degree of relevance as established by the program developers for six out of eight abstracts. (3)

(iv) Given a list of eight abbreviations of information resources (such as ERIC and CIJE), the trainee will correctly match five out of eight acronyms with brief descriptions of their purposes or functions. (2)

Skill Objectives for the Transformation Process

		Level of Competence
1)	Screen resources and products for specific relevance to a client's request.	S
2)	Organize and display screened information.	C
3)	Abstract accurately the contents of a document based on thorough examination.	S
4)	Assess self-competence to synthesize information for the client.	O
5)	Discriminate appropriate alternative formats and styles for presenting screened information.	S

The following are examples of performance objectives related to the transformation process:

(i) Given a statement of a hypothetical client's problem, including its limitations, and a list of resources and documents available to the EIC, the trainee will, to the instructor's satisfaction, indicate the items he selects as appropriate, describe his plan for organizing them, and state his rationale for doing both. A criterion list of acceptable answers will be supplied by the program developers. (2, 5)

(ii) After retrieving relevant information on his "learner-client's" problem, the trainee will transform the information into a comprehensive written report to his client which describes his rationale for the selection and organization of the information, as judged by the instructor to be at least "adequate" on a scale ranging from "very adequate" to "very inadequate." (2, 4)

(iii) Given a research report, the trainee will prepare a one-page indicative abstract that adequately represents its content according to the standards for abstracting. (3)

(iv) Given a report on a completed research study or project, the trainee will prepare a one- or two-page informative abstract that adequately describes the problem studied, the approach used, and the major conclusions according to the standards for abstracting. (3)

Skill Objectives for the Communication Process

		Level of Competence
1)	Report orally and in writing transformed information to the client.	C
2)	Convey to the client judgments about the quality and appropriateness of information presented.	S
3)	Identify and delineate ways in which the client can make effective use of the information presented.	S
4)	Attend to client responses in such a way that communication techniques can be adjusted.	S
5)	Verify that information provided satisfies the request as negotiated with the client.	S
6)	Compile and disseminate topical information of general professional interest.	0

The following are related performance objectives for the communication process:

(i) Given a problem statement and a transformed information package, the student will prepare a letter of transmittal to the client which, in the judgment of the instructor, indicates:

(1) a restatement of the problem;
(2) the organization of the package;
(3) limitations, cautions, and exclusions on materials in the package;
(4) suggested course of action for the client in using package;
(5) EIC's judgment of self-competence in problem area; and
(6) EIC's desire for feedback from the client. (1, 2, 3)

(ii) After viewing a "role-playing" situation in which an EIC is conveying to a client a transformed information package, the trainee will indicate his recognition of elements essential to the communication process by completing a checklist, on which he specifies:

(1) the EIC's strong points in the communication process;
(2) the EIC's weak points in the communication process; and
(3) suggestions for more effective methods the EIC could use in communicating the information package to the client.

Each trainee's response will be judged adequate to the extent that it generally coincides with trainee group consensus. (1, 4)

(iii) After preparing the transformed information package on his "learner-client's" problem, the trainee will present the package to the "client" and will, in the judgment of both observer(s) and "client," effectively communicate its contents, including:

(1) a restatement of the problem;
(2) the organization of the package;
(3) limitations, cautions, and exclusions on materials in the package;
(4) suggested course of action for the client in using package;
(5) EIC's judgment of self-competence in problem area; and
(6) request for feedback from the client. (1, 2, 3, 4, 5)

Skill Objectives for the Evaluation Process

		Level of Competence
1)	Analyze and assess one's own performance of the processes of negotiation, retrieval, transformation, and communication.	S
2)	Obtain feedback and follow-up evidence from client as to the effectiveness and utility of the service provided.	S
3)	Assess the overall value and effect of the EIC's operations to provide a basis for improvement of services.	0
4)	Recognize that functions, roles, or administrative procedures in the EIC system may need to be adjusted or changed as the result of evaluation.	0

The following are statements of related performance objectives:

(i) The trainee will construct an evaluation form to be used by an EIC in objectively assessing his performance in the five EIC processes, including criteria for successfully estimating the total effect of his service, as judged by the instructor to be "adequate" against a model provided by the program developers. (2, 3)

(ii) Given a copy of a final report to a client of retrieved and transformed information, the trainee will write a critical evaluation of:

- (1) definitiveness of the problem statement;
- (2) appropriateness and completeness of the retrieved information;
- (3) clarity of the transformed information package; and
- (4) comprehensiveness of the letter of transmittal.

A model for judging effective evaluation will be provided to the instructor by the program developers. (1)

(iii) After giving the transformed information package to his "learner-client," the EIC will be judged effective in his performance if the client indicates that the package meets the specifications of the negotiated contract. (2)

D. INSTRUCTIONAL ACTIVITIES

Two major instructional modes are applied:

1. Learning-Task-Centered Mode. This is in sharp contrast with the traditional teacher-actor, learner-audience, teacher-teaching-a-subject mode. In the learning-task-centered approach (Banathy, 1969), the learner's environment is arranged so that he can master the knowledge, skills, and attitudes required to perform learning tasks described in the objectives. The learner is involved actively and intensively as the actor on a learning stage. The teacher sets the stage and is involved in facilitating learning.

2. Functional Content Sequence (Smith, 1968). The sequence of instruction, insofar as it makes materials more meaningful, can greatly affect the motivation of students. The essential form of functional context sequencing, which has been tested in a number of research studies and been shown capable of reducing student failure (Brown, *et al*., 1959; Goffard, *et al*., 1960; Hitchcock, Mager and Whipple, 1958; Hood, 1967a, 1967b; Shoemaker, 1960), is to:

    a. Provide a meaningful orientation to the entire job for which a student is being trained;

    b. Introduce and organize jobs so that the relevance of each to the whole job can be demonstrated to the student at the time the topic is introduced;

    c. Follow a whole-to-part sequence in teaching functions or procedures; and

    d. Programme instruction for each student so that he learns a graded series of tasks, each new task requiring the student to master new knowledges and skills.

With the exception of written technical or supplemental information and guidelines, instructional activity consists primarily of direct student participation in simulated and/or real-life problem solving. Training research has demonstrated repeatedly that skills training is effective only if the trainee is actively engaged, both individually and in groups, in working through a carefully planned sequence of activities and problems. Technical information, guidelines, and theoretical instruction are therefore introduced only when appropriate, according to the principles of "Functional Context" sequencing.

Instructional activities in each major module of the course have three phases: (1) preparation, (2) learning, and (3) application. During the preparation phase, trainees are introduced briefly to the major process of the module and are exposed to a diagnostic exercise which probes their ability to perform skills associated with the process. This is followed by the learning phase, which is an intensive training experience consisting of content presentation, written and oral exercises, and/or simulation activities. The module concludes with the application phase, during which trainees are exposed to a problem to test their knowledge of and/or capability to perform the major process.

Throughout the course, trainees learn and apply EIC process skills primarily through large- and small-group, as well as individual, activities, including role-playing, problem-solving, simulation, and decision-making exercises. Some instructor presentation, averaging approximately 20 minutes per session is also included.

The instructional activities are designed to fit the ten-session pattern of a quarter-term schedule. They can be expanded, however, for compatibility with the longer fifteen-session pattern of a semester schedule. A description of the instructional activities in each session follows.

Session 1: Emerging Role of the Educational Information Consultant. The session opens with a brief presentation on the growing need for dissemination of educational information, the development of a linkage system to bring information from resource to user, and the role of the Educational Information Consultant (EIC) in that linkage system. Trainees are oriented to the basic processes comprising the EIC role: negotiation, retrieval, transformation, communication, and evaluation. Trainees then read and discuss case histories of persons operating in EIC roles at four different levels within the information dissemination network.

The session closes with a communication game, which is played in pairs. Initially, the communication between each pair is one-way, one member giving the other directions for putting a "T-puzzle" together. After a limited time, two-way communication is opened. Finally, a visual demonstration is permitted. Trainees engage in a concluding discussion of basic problems involved in communication and draw correlations between their experience with the game and the interactive processes associated with the EIC role.

Session 2: Negotiation. The session opens with a preparatory diagnostic exercise in which a telephone negotiation between an EIC and a client is presented on audio-tape. Trainees design a form for recording the results of the interview and also record observations of the negotiation process. They discuss this introduction to the topic of negotiation within the context of their outside reading and the ideas considered in Session 1.

Trainees then form triads to participate in a structured role-playing exercise on the negotiation process. One member of the triad plays the role of an EIC; another, the role of a client; and the third, an observer. The persons playing the roles of client and EIC conduct an interview to define the client's specific instructional problem and to identify his corresponding information needs. The person in the observer role evaluates their effectiveness in performing the negotiation. Each triad then discusses descriptors selected by the EIC and client to search for information relevant to the problem. They also exchange feedback on their performance. A brief, large-group discussion for comparison of descriptors and for analysis of negotiation skills and techniques follows.

Session 3: Negotiation. After a discussion of the preparatory readings on the negotiation process and a brief introduction to the forthcoming exercise, trainees divide into teams of four. Members alternate in the roles of EIC, client, and two observers so that each has an opportunity to act as a client and negotiate his own prepared problem with another team member playing the role of EIC. (The person acting as

EIC will adopt his client's problem as his own topic for subsequent retrieval, transformation, and communication assignments during the course.) During negotiation, each EIC records data about his client's problem and information needs on a checklist he had designed as a preparatory assignment. After two of the prepared problems have been negotiated, the team pauses to evaluate them. This feedback process is repeated when the remaining two client problems have been negotiated.

For the application exercise, trainees record their analysis of the same audio-taped negotiation interview which opened the module.

Session 4: Retrieval. A short objective preparatory exercise opens the first session on the retrieval process. A review and discussion of readings on problem definition, selecting descriptors, and search strategy follow.

Trainees next examine a "Search Procedure Form." They complete an individual written exercise in which each records a brief statement of his client's problem and the descriptors selected. Trainees then group for a round-table "brainstorming" session, during which each trainee presents his problem to the group members who can suggest descriptors and/or approaches to employ in his search.

Each trainee is introduced to the Guide to Educational Resources and is instructed how to work with the "Search Procedure Form." Trainees also examine selected secondary information sources, such as CIJE, RIE, and Education Index as possible starting points for their search. The session concludes with pairs of EIC's and clients meeting briefly to renegotiate or reformulate their problem.

Session 5: Retrieval. An exercise on abbreviations, completed as a preparatory assignment, is the vehicle for a large-group discussion of frame of reference and its effect on understanding of the client's problem and definition of the search. Trainees also consider the influence of risk-taking behavior, knowledge-state, and personality attributes on EIC selection and use of resources.

Discussion is then directed to alternative educational information sources. Two filmstrip presentations on the ERIC and DIALOG research information system are followed by an introduction to the Far West Laboratory's curriculum information system, ALERT (Alternatives for Learning through Educational Research and Technology). Trainees also evaluate individual and group performance on a second preparatory assignment, "Making Relevance Judgments," in which they analyze the pertinence of abstracts on ERIC documents to two search topics. The exercise is designed to sharpen skills in selecting and screening documents appropriate to a client's problem. The session concludes with a written application exercise on the retrieval process.

Session 6: Transformation. An individual, written preparatory exercise, simulating the process of selecting, organizing, and synthesizing a package of information for a client, opens this module. Trainees then read and participate in a large-group discussion of the Transformation Guidelines, which outlines skills and techniques involved in transforming retrieved information, and the Transformation Checklist, which lists various types of transformation formats.

Trainees next survey selected examples of transformed information--bibliographies, handbooks, state-of-the-art reports, literature reviews, etc.--and identify them by type, purpose, and intended audience. The concluding activity requires that trainees individually plan transformation of information on their client's problem.

Session 7: Transformation/Communication. The session begins with a large-group discussion of abstracting as a method of transformation, based on preparatory readings and a review of Guidelines for Abstracting. Trainees consider two types of abstracts--indicative and informative--and compare the abstract they have written as a preparatory assignment with samples of both types. The module concludes with a written application exercise, which is similar in structure to the preparatory exercise.

The module on Communication is introduced through an individual preparatory exercise in which each trainee composes a letter conveying a package of transformed information to a hypothetical client. Trainees then form small groups to engage in review of a preselected information package, with the group objective of developing a role-playing skit of an EIC/client, face-to-face communication. Selected members of each group then role-play the skit for their own and another group, whose members evaluate the performance. A large-group discussion of the role-playing activity and of the communication process concludes the session.

Session 8: Communication. Trainees briefly discuss the Guidelines for Conveying Information to Client. They then reconvene in the teams of four formed during the negotiation module to rotate playing EIC, client, and two observers. Each EIC communicates the findings of his search. He presents to his client a package of information which he has organized and abstracted to satisfy the client's request. Observers give feedback to each EIC; the team, as a whole, evaluates the effectiveness of all four EIC/client communications. Exemplary EIC reports are selected by the teams for presentation to the rest of the trainees. A large-group critique of the activity concludes the session.

Session 9: Evaluation. As an individual application exercise in communication, each trainee submits a letter conveying his information package to his client. Trainees then participate in a large-group discussion of the evaluation process. They consider problems, sources, methods, and techniques for evaluating performance of: (a) each major EIC process; (b) the EIC role; and (c) the center, library, or system in which the EIC is functioning. Individual trainees make oral presentations to the large group, evaluating information centers they have visited and utilized. Trainees also review and discuss case histories and readings on information centers and personnel in terms of the evaluation process.

Session 10: Evaluation. The course concludes with a written final examination--an application exercise on the major EIC processes and skills covered in the five instructional modules. Trainees then discuss and evaluate the course and receive feedback on performance from the instructor.

E. MATERIALS

A looseleaf notebook contains the job aids, readings, learning exercises, guidelines, and other accessories developed for trainee use in the course. These materials in the trainee notebook are grouped into ten sections, which correspond to the ten-session format of the course. The instructor's notebook consists of the trainee materials for the ten sessions, accompanied by a schedule and detailed notes on the format and content for each three-hour instructional session. All trainee and instructor materials, including diagnostic exercises, are compiled in the sample notebook accompanying this report.

Audiovisual materials now built into the instructional time include a filmstrip with tape on the ALERT information system, an audio-tape on the negotiation process, and a slide-tape set describing the ERIC DIALOG system. Copies of these materials were available in the Far West Laboratory. Two films--"The Paper Blizzard" (22 minutes) and "SPIRES and BALLOTS Report" (12 minutes)--were optional materials for use in the retrieval module. Neither film was available from the Far West Laboratory, but both were rented, at nominal cost, from film distributors.

III. DEVELOPMENT AND EVALUATION OF THE INSTRUCTIONAL SYSTEM

The strategy for development of the instructional system took the following sequence:

Design and testing of the conceptual model;
Planning and design of the training program;
Preliminary field testing and evaluation of the training program;
Main field test development and evaluation; and
Preliminary operational field testing and analysis.

The above sequence observes the product development strategy of the Far West Laboratory. That strategy unfolds in the following way: after conceptualization, planning, and a training plan have been completed, a preliminary field test is conducted with a small, but representative, sample of the target audience. Following this test, a main form of the product is then developed. This form incorporates any revisions and changes needed to insure effective performance of the product. The product then undergoes a main field test with a larger sample of the target audience. This test is conducted under Laboratory supervision and is designed to check the product's effectiveness in meeting stated objectives. During this field test stage, revised and refined evaluation procedures, formats, and instruments are checked.

Generally, Laboratory products are carried through an operational field test stage, during which the final product is tested for its success in actual settings without Laboratory supervision. The present project was not funded for this phase; however, a feasibility test, preparatory to the normal operational test, was conducted with a small target audience sample to determine whether modifications and revisions would be needed to make the main form of the product operational and transportable. (A proposal for additional funding to carry the development of the instructional system through the operational testing and dissemination stages has been submitted to and approved by the U. S. Office of Education, National Center for Educational Communication.)

The procedures and results of each of the five phases in the developmental strategy are reported in the following sections.

A. DESIGN AND TESTING OF THE CONCEPTUAL MODEL

The initial activity in this phase of development involved a survey of the literature. This produced some 500 abstracted items for staff reference, furnished input for the development of conceptual models, and permitted ready access to documents of greatest relevance to the project.

Project staff also researched and prepared working papers which described the boundaries of the training system, defined training needs and requirements, specified resources available and constraints limiting the design and training effort, and stated specifications of expected performance. The staff also developed alternative conceptual models of the instructional system.

The working papers and models were presented to a panel of consultants at a two-day conference held in August 1970. Participants in that conference, in addition to project staff and Far West Laboratory advisers, included six consultant-experts involved in various levels of service in the educational information dissemination/evaluation network, specifically, in local and county PACE centers, a regional educational resources center, an ERIC clearinghouse, and in a State educational program, planning, and development agency.

The outcome of the conference was the selection of a conceptual model for the instructional system and the identification of corresponding goals for training, The consultants described, as an additional outcome of the conference, behavioral task areas in which trainees should develop competence sufficient to perform effectively the major processes of a dissemination/evaluation role.

Project staff subsequently defined and displayed the conceptual model and identified five major processes as the focal areas for training: (1) negotiation of a client question, (2) retrieval of relevant information from resources, (3) transformation of the retrieved information into a form actionable for the client, (4) communication of the information, and (5) evaluation, reformulation, and adjustment. (See Chapter II.A., CONCEPTUAL BASIS, for a detailed explanation of the model.)

With the list of goals and task areas suggested by the conferees as a basis, the project staff also developed a set of training goals for the instructional system and a list of knowledge and skill competences for dissemination/evaluation personnel completing the training.

These goals and competences, along with a summary report on the results of the conference, were then presented to all six consultants for their review and/or comment. Three of the consultants were asked to submit a critique of the goals and competences and to respond to a detailed questionnaire on the proposed training model and instructional techniques. Their affirmative response constituted final validation of the model and proposed training goals and objectives for the instructional system.

B. PLANNING AND DESIGN OF THE TRAINING PROGRAM

The planning, design, and selection of training content and methodology constituted the next phase of development. An extensive search and thorough screening of available literature on educational information dissemination, knowledge utilization, library and information science, and processes for effecting educational change were conducted for four months by a project staff of three, with librarian assistance. Four ERIC searches by the DIALOG computerized retrieval system were completed. Several hundred bibliographical references were culled, categorized, and abstracted or retained as original documents.

Following exploration of training programs relevant to the model and also completion of site visits to operating educational information centers, instructional objectives were formulated and training content and method selected. A detailed course plan, outlining the time schedule, format, specific activities and content, and objectives for each of ten three-hour instructional sessions, was prepared, along with a narrative description of the sessions. Prototype learning exercises were developed and validated informally with representative samples of the target audience.

A second conference was then held in December, 1970, with several of the consultants who participated in the first phase of development and with others who were to be subsequently involved as instructors and field test observers. This group selected and tried out learning exercises and submitted written critiques of the course plan, student materials, and evaluation devices presented for their review. The conferees approved the overall plan and design of content and materials for the training.

C. PRELIMINARY FIELD TESTING AND EVALUATION OF THE TRAINING PROGRAM

The preliminary field test (PFT) of the instructional system was conducted: (a) to determine the feasibility of the training program design for meeting stated objectives; (b) to identify the strengths and weaknesses in the training activities; (c) to collect and assess data on the evaluation procedures and instruments; and (d) to provide a basis for revising elements as needed.

1. Method

The training program was tested in the form of a thirty-hour course with ten weekly sessions of three-hour duration. Since determination of the feasibility of this design was a major purpose of the PFT, the selection of an appropriate test site was given greater emphasis than direct selection of subjects. The University of California (U.C.), Berkeley, was therefore chosen because the course could be offered for three quarter-term units of credit through the U.C. Extension Program. Both the University and the Laboratory announced the course through limited direct mailings to and postings in Bay Area school districts, libraries, media and resource centers, and other educational agencies and organizations, such as the California Association of School Libraries.

Eleven persons subsequently enrolled in the course, which was offered during the Winter quarter from the beginning of January to the end of March 1971. This self-selected sample proved to be a mixed, but appropriate population. It included personnel in various information dissemination positions and roles, such as librarian for a federally funded community action project, director of a school district media center, chairman of a university library science department, school librarian and consultant, and research assistant in an educational development agency. Dr. Wayne E. Rosenoff, director of this project, served as instructor for the course. Dr. Robert Peterson, director of the Instructional Planning and Management System Component of the Laboratory's Communication Program, served as independent observer.

Field test procedure stipulated that the course be conducted according to the schedule and format for instruction approved during the preceding phase of development. Eleven participant-trainees completed the ten sessions, during which they tried or used all preparatory, learning, and application exercises and materials. In addition, they completed experimental forms of the overall course and modular pretests and posttests.

Participants were asked to judge the usefulness of the skills emphasized in the course and the quality of the instructional methods and materials used in the training. Throughout the course, participants were given the opportunity to respond freely to questions posed by the project staff, as well as to draw attention to problems and questions not previously identified by the staff.

2. Results

Participants indicated that there exists a need and desire for training toward a role in educational information dissemination. They saw that the knowledge and skills gained from taking the course were useful, indicating as particularly valuable the acquisition of skills in the major processes of negotiation, retrieval, transformation, communication, and evaluation.

That the participants learned the skills and knowledge was confirmed by their performance on an experimental paper-and-pencil cognitive exercise administered at the beginning and again at the end of the course. Although the combination objective/subjective test was developed primarily to check the cognitive evaluation format and procedure, results showed that participants made statistically significant gains from pretest to posttest. When pretest/posttest comparisons of total mean scores were made as judged by two independent raters, significant results were obtained ($t = 4.16$, $df = 7$, $p < .01$ and $t = 7.21$, $df = 7$, $p < .01$).

Reactions to elements of the training varied. According to the observer's report, instructional activities and exercises which required active trainee participation seemed to have the most success. Organization of trainees into small working groups or teams seemed to promote active individual participation, as did role-playing exercises and simulations. Discussions and brainstorming exercises also demonstrated the value of informal exchange as an instruction technique.

It was suggested that some elements of the training which, as presented, appeared not useful to the course, be changed or else dropped. The introductory oral presentation on the levels within the educational information network was one such example of an ineffective instructional format. Another individual written exercise in classification was assessed as too projective a technique for trainees to use in its existing form as a basis for in-class discussion.

It was also suggested that the scheduling of activities was too rigid and that more flexibility and on-the-spot accommodation of trainees' desires for discussion be built into the course. In addition, the need for development of a more precise set of instructor guides or notes, as well as a more effective mechanism or procedure for feedback on trainee performance, was indicated.

Generally, however, the results of the PFT were favorable regarding the design of the course, its modular format, and its clear achievement of a very high level of active trainee participation.

D. MAIN FIELD TEST DEVELOPMENT AND EVALUATION

The main field test (MFT) represented a systematic effort to evaluate the training program and to provide information on its effectiveness in achieving the stated objectives. The main field test was also used to identify ways in which parts of the program might be improved. Following the MFT, decisions were made about possible modifications needed to correct any identified deficiencies in it.

1. Method

The MFT was conducted from mid-February through mid-May 1971 in cooperation with the Graduate School of Education, San Francisco State College (SFSC) with a sample of the target audience almost twice as large as that in the PFT. Again, the choice of test site took precedence over the selection of subjects. Scheduling the course at SFSC provided the opportunity to check the suitability of the training form for a semester-term schedule. The course was offered for three semester units of credit through the Department of Interdisciplinary Studies. Of the fifteen sessions scheduled for the semester, ten were allotted intact for the implementation of the complete thirty-hour course, one for an introduction to the work of the Far West Laboratory and to the purpose of the MFT, one for a presentation on use of the college library facilities, one for a free question-and-answer session, one for feedback on and discussion of preliminary results of the MFT, and one for independent study.

The 18 persons who participated in the MFT were, for the most part, regularly enrolled graduate students in education, notably in the areas of interdisciplinary studies and educational technology. They had been recruited via posted announcements and word-of-mouth within the School of Education. They were, by nature and motivation, highly interested in a new field. Many of the 18 held jobs while completing work toward the master's degree. Their occupations ranged from elementary or secondary school teacher, Teacher Corps instructor, audiovisual equipment salesman, director of a curriculum project, and educational research analyst to research chemist and business training analyst.

Instructor for the course was Freeman Elzey, Research Associate at SFSC. Nancy Adelson, a program assistant on the project staff, served as official Laboratory observer. Other members of the staff responsible for development of the instructional system occasionally observed the field test and were actively involved as coordinators of the field-testing activities.

2. Procedure and Format

Evidence was collected on three aspects of the instructional system:

(1) trainee cognitive growth; (2) trainee attitudinal or affective response; and (3) performance of all exercises and the course schedule. Both summative and formative evaluation were thus conducted, with emphasis on the latter.

The procedure and format for measuring the overall cognitive effect involved the administration of a written exercise on the whole course at the beginning (Session 1) and again at the conclusion (Session 10) of training. Written exercises designed to measure the cognitive effects of individual modules were also administered on a pretest/posttest basis in four of the five modules.

Affective questionnaires were administered at the conclusion of the Negotiation module, Retrieval module, Transformation/Communication modules and Evaluation module and also at the conclusion of the course. These same questionnaires also contained product-rating items.

In addition, transactional records on each session of the MFT were kept by the Laboratory observer to check the extent to which the course was being implemented as planned and also to collect evidence on the nature of transactions between students-and-instructor and students-and-students.

3. MFT Instruments

The overall course cognitive test (presented in Appendix A-1) included multiple-choice, matching, and completion objective items, as well as some short-answer subjective items. The modular tests were as follows:

Module 1:	Negotiation Exercise	Objective and short-answer items, requiring design of a recording form and brief responses to questions on an audio-tape of an interview.
Module 2:	Retrieval Exercise	Objective, matching, and completion items on phases of the retrieval process.
Module 3:	Transformation Exercise	Open-ended subjective items, requiring review of the problem statements and design of information package.
Module 4:	Communication Exercise	Subjective test, requiring composition of a letter of conveyance to client.
Module 5:	Evaluation	No pretest/posttest.

(See Appendix A-3 to A-6 for MFT cognitive evaluation forms.)

The questionnaires containing affective scales asked trainees to make ratings of the extent to which they intended to apply the skills and knowledge covered in training to their real-life work. These same questionnaires also included items asking trainees to make ratings of the quality of the elements and methods used in the training and of each module as a whole. Open-ended questions were included in the whole course affective questionnaire to elicit free responses regarding the training program. (See Appendix B-1 to B-5 for MFT combined affective and product evaluation forms.)

4. MFT Form

The MFT form of the instructional system included both trainee and instructor materials for ten instructional sessions. The trainee materials were contained in a looseleaf notebook and consisted of preparatory and in-class readings, exercises, guidelines, checklists, information packets, and a Guide to Educational Resources. These materials were distributed session-by-session.

The instructor's materials consisted of the trainee notebook, with a schedule and set of instructor's notes for each session. The instructor's notes were detailed, providing specific timing, topics, background data and/or information for instructor review, and specific explanations and directions to be given to trainees.

In addition, each trainee was provided in Session 1 with a course outline, listing preparation assignments and topics for each of the ten sessions.

5. Results

Course Cognitive Outcomes. Cognitive evaluation procedures assessed the extent to which knowledge, processes, and skills required of the EIC were attained. Table 1 on p. 40 presents the results of the course pretest/posttest comparisons. (Appendix A-1 contains the overall course exercise to which Table 1 data refers.) For statistical significance, a level of .05 or less was required for these and all other statistical tests reported. As shown in Table 1, on the following page, there was a significant increase in mean scores from pretest to posttest as judged by the two independent raters. The reliability of the judges' rating was acceptable. It was somewhat higher for the pretest ratings (.87) than for the posttest ratings (.76). These results indicate that an overall cognitive change, in a positive direction, was effected by the instructional system and training.

The statistical pretest/posttest comparisons for each of the objectively scored items are presented in Table 2, p. 41. There was a significant increase in the mean scores from pretest to posttest in

TABLE 1

Results of the Pretest/Posttest Comparisons of Combined Objectively and Subjectively Scored Items in the Overall Course Diagnostic Exercise for Site #2

		PRETEST			POSTTEST					
	N	Mean	95% Confidence Interval	SEM	Mean	95% Confidence Interval	SEM	t	P	Omega Squared
				Rater W						
TOTAL SCORE	18	45.50	40.63-50.37	2.31	58.33	53.22-63.44	2.42	5.32	<.005	.43
				Rater N						
TOTAL SCORE	18	44.83	40.08-49.58	2.25	60.44	56.33-64.55	1.95	7.50	<.005	.61
			r = .87			r = .76				

TABLE 2

Results of the Pretest/Posttest Comparisons of Objectively Scored Items with Multiple Correct Answers in the Overall Course Diagnostic Exercise for Site #2

		PRETEST			POSTTEST					
	N	Mean	95% Confidence Interval	SEM	Mean	95% Confidence Interval	SEM	t	P	Omega Squared
PROBLEM II:										
Section 1	18	9.50	8.63-10.37	.41	10.61	9.98-11.24	.30	2.58	<.01	.14
Section 2	18	10.50	8.98-12.02	.72	11.33	10.11-12.55	.58	1.48	N.S.	.03
Section 3	18	10.77	9.71-11.83	.50	12.44	11.43-13.45	.48	3.21	<.005	.21
PROBLEM III:										
Question 1	18	1.72	.96- 2.48	.36	3.72	2.79- 4.65	.44	4.16	<.005	.31

three out of the four questions. Thus, there was some increase in the trainees' ability to specify differences and similarities between libraries and information centers, to define task responsibilities of the EIC role, and to identify commonly used acronyms for information resources.

Table 3, p. 43, presents the pretest-posttest comparisons for the objectively scored items in the overall course exercise. As indicated in this table, only two out of the five questions showed significant change. These questions dealt with matching information resources with brief descriptions of their purpose. The information tested in Problem III, questions 2-6, was subsequently deleted.

Table 4, p. 44, presents the statistical comparisons, as rated by two judges, for each of the subjectively scored items on the overall course exercise. All increases and mean scores for these items for both raters were statistically significant, except for Rater W on "quality of rationale" for questions 1-5. Rater W generally provided lower ratings than Rater N on both pretest and posttest, causing the percentage of absolute agreement to be rather low, particularly on the posttest. Reliability of pretest/posttest ratings ranged from r = .12 to r = .87. The ratings were generally higher on pretest than on posttest.

Module Cognitive Outcomes. Tables C-1 through C-4 in Appendix C show the statistical pretest/posttest comparisons of the cognitive exercises for the Negotiation, Retrieval, and Communication modules. (Unfortunately, the student response sheets for the Transformation module exercise were destroyed by fire prior to data analysis. There

TABLE 3

Results of the Pretest/Posttest Comparisons of Objectively Scored Items with a Single Correct Answer in the Overall Course Diagnostic Exercise for Site #2

	N	A	D	Chi Square*	P	
PROBLEM III:						
Question 2	18	0	3	1.33	N.S.	
Question 3	18	1	4	.80	N.S.	A = Number correct on Pretest and incorrect on Posttest
Question 4	18	0	2	.50	N.S.	
Question 5	18	0	13	11.07	<.001	D = Number incorrect on Pretest and correct on Posttest
Question 6	18	1	7	3.12	<.05	

*McNemar's Test for Significance of Change. See Siegel, Sidney. Nonparametric Statistics for the Behavioral Sciences. New York: McGraw-Hill Book Company, 1956, p. 63.

TABLE 4

Results of the Pretest/Posttest Comparisons of Subjectively Scored Items in the Overall Course Diagnostic Exercise for Site #2

		PRETEST					POSTTEST							
	N	Mean	95% Confidence Interval	SEM	r	% Agreement	Mean	95% Confidence Interval	SEM	r	% Agreement	t	p*	Omega Squared**
Quality of Rationale:														
Rater W	18	2.38	1.68-3.08	.33	.26	39%	2.50	1.85-3.15	.31	.55	33%	.30	N.S.	.00
Rater N	18	2.38	1.96-2.80	.20			3.22	2.52-3.92	.33			2.54	<.025	.13
Terminology:														
Rater W	18	.88	.44-1.32	.21	***	33%	2.33	1.68-2.98	.31	.45	17%	3.81	<.005	.27
Rater N	18	1.55	.92-2.18	.30			3.61	3.15-4.07	.22			6.24	<.005	.51
Question 6:														
Rater W	18	1.77	1.20-2.34	.27	.76	39%	2.72	2.19-3.25	.25	.66	28%	2.87	<.01	.17
Rater N	18	2.33	1.65-3.01	.32			3.50	2.99-4.01	.24			4.17	<.005	.31
Question 7:														
Rater W	18	2.05	1.23-2.87	.39	.78	44%	3.05	2.46-3.64	.28	.12	11%	2.63	<.01	.14
Rater N	18	1.72	1.19-2.25	.25			3.22	2.67-3.77	.26			4.41	<.005	.34
Question 8:														
Rater W	18	1.38	.68-2.08	.33	.87	50%	2.44	1.89-2.99	.26	.54	11%	2.46	<.025	.12
Rater N	18	1.83	1.19-2.47	.37			3.00	2.41-3.59	.28			2.48	<.025	.13
Question 9:														
Rater W	18	1.22	.72-1.72	.24	.75	22%	3.00	2.45-3.55	.26	.66	28%	5.23	<.005	.42
Rater N	18	1.66	.90-2.42	.36			3.50	2.97-4.03	.25			4.18	<.005	.31

*One-tailed test.

**Omega squared indicates the proportion of variance in the dependent variable accounted for by the independent variable. See Hays, W. L. Statistics. New York: Holt, 1963, pp. 323-327.

***Correlation was not computed because the variability was not sufficient to justify use of a correlation coefficient.

was no written exercise for the Evaluation Module.) In general, there were statistically significant increases in knowledge and skills associated with the processes of negotiation, retrieval, and communication. Trainees showed their capability to design negotiation interview forms and to interpret the results of a simulated interview, to identify tasks essential to the planning and conduct of a search strategy, to select and describe a plan for transforming information on a client's problem, and to prepare a comprehensive letter conveying the information package to a client.

Course Affective Outcomes. Affective outcomes were measured in terms of trainee attitudes toward the instructional system or training as a whole, toward individual elements, that is, the instructional modules, and toward subelements, that is, specific exercises and materials. The minimum standard for acceptability of ratings in the affective evaluation, both for the entire course and for individual modules, is that the mean rating for each item be 4.5 (lower limit of "5" rating) on a seven-point scale or, in some ratings, 3.5 (lower limit of "4" rating) on a five point scale.

Table 5, p. 46, presents trainee means on rated items from the affective questionnaire on the entire course. (See Appendix B-1 of this document.) The standard was achieved on 83% (or 10 out of 12) of the items. Response to these items indicated the extent to which trainees valued the course and their experience during training. The trainees apparently considered that the skills learned in the course will be useful on the job. On a 5-point scale, with "1" being definitely not useful and "5" being definitely useful, all but one subject

TABLE 5

Results for Affective Questionnaire

Site 02
Sessions 1 - 10

ITEM	Mean	SEM	N	Achieved Standard
4. Do you consider that the job you now hold (or are working toward) would require you to use the skills you've learned in this course?	4.56*		18	yes
5. How personally useful do you feel the subject matter covered in this course will be to you?	4.61*		18	yes
7. How did you enjoy this course?	4.22*		18	yes
11. After reading each of the items below, please circle the number which most nearly corresponds with your opinion.				
a. This course helped me to clarify my career plans.	3.12		17	no
b. I would like to take this kind of course again.	4.33		18	no
c. I am very satisfied with this course.	5.24		17	yes
d. I am now quite excited about the field of educational information dissemination.	4.70		20	yes
e. I would recommend that others take this course.	6.12		17	yes
12. For each of the following items, please circle the number which most nearly corresponds now with your feelings upon completing this course.				
a. The relevance of the training in this course to you in your present position.	5.47		17	yes
b. The relevance of the training in this course to you in your future position.	6.12		16	yes
c. The value of this training in comparison to other training you have received in college or university courses.	5.47		17	yes
d. Your interest in taking more advanced courses in this field.	5.17		18	yes

*These items scored on a five-point scale. All others were scored on a seven-point scale.

responded at "4" or "5." There were 67% who responded at "5" and 28%, at "4." These trainees also seemed to enjoy the course--89% of them marked "4" or "5" on a 5-point scale varying from not at all ("1") to very much ("5") enjoyed the course.

When asked to indicate on a 7-point scale, varying from definitely no ("1") to definitely yes ("7"), whether they would recommend that others take this course, 94% of the trainees checked "5" or better. When comparing the value of their training in the course to other training received in college or university courses, 76% of the trainees responded at 5 or better on a 7-point scale varying from "1", much less value, to "7", much more value.

Module Affective Outcomes. Tables C-5 through C-8 in Appendix C present the trainees' ratings on affective items for individual modules on Negotiation, Retrieval, Transformation/Communication, and Evaluation. (These instruments are presented as Appendix items B-1 through B-5.) The percentage of items achieving the standard for each module is shown below:

Module	Percentage
Negotiation	67%
Retrieval	71%
Transformation/Communication	86%
Evaluation	86%

Summary. Reaction to participation in the training was, then, generally favorable. Several trainees, however, did indicate that the time schedule was overcrowded, considering the amount and nature of the activities to be covered. When asked what they did not like about the course, trainees commented: "Too much to cover in a session"; "the time squeeze on activities"; "the frustration of not having enough time for creative learning experiences." These comments are supported by the conclusions of the course instructor and observer, who indicated that compressing the course into 30 class hours did not allow sufficient time for trainees to discuss and thoroughly integrate what they were learning.

Reaction to the experience of teaching a complete, "pre-packaged," student-oriented course can perhaps be derived from the following comments of the instructor:

> The amount of student activity built into this course (as opposed to the passivity of listening to lectures), the rapid sequencing of the course, the large amount of material provided the student, and the assignment of a project that involves serving another student, were indeed a departure from the usual academic process. There is no question that after the initial "shock" of this process, the students adapted quite well and saw it as a very positive and rewarding learning experience.

E. PRELIMINARY OPERATIONAL FIELD TEST

A preliminary operational field test (POFT) was conducted: (a) to test the feasibility of the system as a "transportable" package, i.e., to test whether the first design and the content of the guideline materials provided sufficient support for the instructional manager to conduct the course successfully without active intervention of a development team member; (b) to test the value of having the instruction in an information center; and (c) to test the value of the training for personnel already functioning at various levels in the EIC role, and at various stages of professional competence.

1. Method

The field test site was the San Mateo County Education Resources Center, Redwood City, California. Ten weekly sessions were held April 1 through June 10, 1971. The Center Director, Dr. Frank Mattas, served as instructor, and Dr. Sanford Glovinsky served as the independent observer. Both had participated in the early planning conference and in the conference held just prior to the preliminary field test.

The trainee population consisted of five members of the Education Resources Center staff, a member of the San Mateo PACE Center staff, two district librarians, and a public information specialist from a nearby district. Both classified personnel and professional persons employed in the information field were represented in this class.

The course was offered through the University of California, Extension Division, Berkeley. It consisted of ten sessions for which three quarter units of credit were awarded. The course materials used at this site were essentially the same as those tested in the main field test.

Since the chief objective of this field test was to establish whether the instructor materials and guidelines were sufficiently developed for independent instructor use, Dr. Mattas received the materials with minimal consultation or preplanning, which required him to rely on his own judgment to organize and conduct the training and obtain evaluation data.

2. Results

As stated above, there were three objectives for this pre-operational field test. Careful review of the information obtained from trainees, the instructor and the observer indicate that these three objectives were met with varying degrees of success.

The positive value of the training for personnel already working in an information dissemination role was demonstrated in three ways: (a) through analysis of the course pretest/posttest data; (b) from a report submitted by the Center Director (Dr. Mattas) attesting to positive changes in the behavior of the members of his staff who completed the EIC training; and (c) from statements made by these same members six weeks later regarding the perceived value of the course to them.

Appendix A-2 presents the overall course exercise used in the evaluation of the San Mateo site test (Site 3). Table 6 presents the subjectively scored pretest/posttest results for the five trainees who completed both exercises. This table indicates the number who exhibited an increase, no change, and a decrease, as rated by two independent judges.

Test Items 1 through 5 present the trainee with a simulated request from a client and a set of possible alternative responses that an EIC could make. The trainee is requested to select his "best" response and to provide a rationale for his selection. The rationale provided by the trainee is rated according to a five point scale, with "5" being "excellent" and "1" being "poor."

Table 6 indicates that a majority of trainees exhibited an increase in their ratings from pretest to posttest on each of these items.

TABLE 6

Results of the Pretest/Posttest Comparisons of Subjectively Scored Items in the Overall Course Diagnostic Exercise for Site #3

	Item #1		Item #2		Item #3		Item #4		Item #5	
Rater	N	M	N	M	N	M	N	M	N	M
Increase	4	5	3	3	4	3	3	4	4	2
No Change	0	0	2	2	0	1	0	1	0	2
Decrease	1	0	0	0	1	1	2	0	1	1
Percent Agreement	80%		60%		40%		60%		60%	

	Item #6		Item #7		Item #8		Item #9		Item #10	
Rater	N	M	N	M	N	M	N	M	N	M
Increase	4	4	1	2	4	4	5	4	3	4
No Change	0	0	3	2	0	0	0	1	2	1
Decrease	1	1	1	1	1	1	0	0	0	0
Percent Agreement	100%		80%		100%		80%		80%	

Items 6 through 9 are factual or informational items related to the simulated client's request. Table 6 indicates that Items 6, 7, and 8 reflected an increase in rating for four out of the five trainees, whereas Item 7 reflected a gain in only one trainee as judged by Rater N and in two trainees as judged by Rater M. This item required the trainee to list at least five primary sources to be used in beginning a search. The lack of improvement from pretest to posttest on this item was probably due to the use of the term "primary" which, during the course, took on specific technical meaning. Item 10 in Table 6 is a comprehensive rating based on the extent to which the trainee made use of appropriate terminology in his answers to Items 1 through 9. As indicated in Table 6, the majority of trainees exhibited an increase in their rating on this item. Table 6 also presents the percentage of agreement between the two raters for each item. As expected, the agreement on the informational items (6 through 9) is higher than on items requiring a more subjective evaluation (1 through 5). The agreement between the two independent raters across all ten items was 74%.

Table 7 presents the results of the objectively scored items in the overall course exercise for Site #3. This table indicates the number of trainees who exhibited an increase, no change, and a decrease on each of these four items. The findings indicate that a majority of trainees increased on each of these knowledge items.

TABLE 7

Results of the Pretest/Posttest Comparisons of Objectively Scored Items in the Overall Course Diagnostic Exercise for Site #3

Item No.	a	b	c	d
Increase	3	4	4	3
No Change	0	0	0	2
Decrease	2	1	1	0

The report submitted by the instructor six weeks after completion of the course included the following observations:

> I have noted two major positive changes in the five members of my staff who took the course. They are more aware of the variety of services, indexes, compendia, handbooks, etc. available for their use and are more willing to expand their search efforts to the full range of possible resources. Secondly, they have become sensitive to the large number of personal judgments required in this role, and have become aware of the influence of their own biases in the retrieval process and the effect of their behavior in the communication process. As a result

> of their training, they have become more comprehensive in their searches, and more competent in communicating the information. You can see the improvement in the way they report back to the client. Another thing I liked about the course was that there was something in it for everybody.

Six weeks after the conclusion of the course, trainees from the Education Resources Center staff reported the effects of the learning on their work behavior. All of these individuals have at least a B.A. and several have master's degrees in psychology or education. All have had some sort of library experience and several have had one or two years' experience working at the Resources Center. As might be expected, the trainees from this center were most knowledgeable about the retrieval process. Not only had they the past experience and training in this area, but the Center itself is equipped with very sophisticated equipment and an outstanding data bank. Thus, while they did not find the retrieval module overly informative, they universally reported significant gains in learning in the negotiation and communication processes.

For example, one trainee, who has a master's degree in library science, reported:

> The course was most helpful to me in the area of negotiation. I feel that I do a much better job of finding out exactly what the client wants. I have become more aware of the need to "dig" to find the unspoken needs of the client and bring these out. The area of communication is relevant to my job, both in negotiating the search initially and in writing the final letter of transmittal. The course has made me appreciate the talents and abilities which the EIC must have.

Another trainee, who has a master's degree in psychology, and two years' experience at the Center, reports:

> I learned not be to shy anymore while negotiating with the client. I can ask more questions and get more specifics back much better now. I also understand how the client feels and that sometimes they do not know exactly what they want and I feel that I can now draw out of the person more than I could before. I learned to analyze a problem and proceed accordingly. I try to get a search as simplified as possible and I have learned to pick out specific articles and good things instead of sending too much related materials.

Two other trainees, with several years' experience working at the Center, also reported their most significant learning took place in the negotiation and transformation processes. For example, one stated:

> I have referred to the "Guidelines for Conveying the Information Package" many times in my work as I attempt to organize the materials and present them to the client. I am now able to write a letter of explanation to inform the client about the types of materials collected, and describe special points of interest and suggest uses of the materials, as well as, of course, define the limitations of the search.

The significant thing about these observations is that, although they come from experienced workers in the field of information dissemination, they report significant learning of skills in and appreciation of the interactive aspects of the role. This suggests there is a great need for this training even among professional workers. Librarians and research analysts, for example, may have highly developed retrieval skills but are not necessarily responsive to this aspect of the role.

It should be further pointed out that this group was exceptional in its thorough knowledge of ERIC, which is perhaps one reason why fewer trainees reported significant learning in the retrieval module which places a heavy emphasis on learning about ERIC. Other professionals in the information field who participated in the other field tests were not as familiar with ERIC and were enthusiastic about the training in this area.

The effect of conducting the training in an information center was less clear than the improvement in learning. Although many exercises in the course required the use of resources not typically available in the classroom, or even in some major libraries (such as the ERIC system), most of these exercises were part of the work assigned for completion between sessions. Trainees were able to utilize nearby information centers for their research. While it seems clear that easy access to a well-stocked information center increases trainee performance, it is not mandatory; that is, it is not necessary to physically locate training in an information center. Arming the instructor with criteria for collecting demonstration packets and with lists of possible information resources is sufficient to the needs of the training sessions.

Was the instructional package "transportable"? After reviewing this first experience, the instructor, observer, and project team conclude that while the course, as delivered, was successful in achieving its major objectives, further developmental work is necessary before it can be fully utilized by an autonomous instructor.

The need to perfect the delivery system of course materials--instructor guidelines, trainee exercises and media items--is very evident. To effectively use the course as it now exists, an instructional aide is almost a necessity to assist in the collection and distribution of course documents. To improve the transportability of the system, some necessary developments include improving the directions in the instructor guideline materials, including the criteria for evaluating the exercises, and making the packaging more compact.

Even more importantly, the developmental team feels strongly that the instructor should receive some training prior to teaching the course. Ideally, this experience would come in completing the course as a trainee. Other alternatives might also be found, but the essential condition is that it be a more profound and involving experience than simply reviewing pre-planned lessons. Some of the reasons for this have been discussed previously: the role is new and is highly interactive. The instructor, as well as the trainee, needs to develop an appreciation for these aspects of the role, as well as to become familiar enough with the role processes to be comfortable in teaching them.

This program, then, in its present form, cannot be considered "instructor proof." However, when the reformulation and readjustment of the system as recommended in this report is consummated, the achievement of this end is possible.

IV. CONCLUSIONS AND RECOMMENDATIONS

A. CONCLUSIONS

The outcomes and experiences with the EIC instruction, as it was revealed in interactions with three target audiences in three different environments, indicates that for the most part, the major objectives of the development project were achieved. Trainee, instructor and observer evaluations indicated that this training system is a viable one for teaching the various processes of this information dissemination role. Their reports indicated that the system was received positively.

The evidence is strongly positive that the objective of creating a highly interactive system, as opposed to the listener-learner method, through role-playing exercises, simulated problem-solving situations, and demonstrations by trainees, was achieved.

It is clear that further developmental effort will be required if this training is to become "transportable." The experience gained in the prototype field test of such a form will be invaluable in pursuing this objective.

The project team is agreed that overlapping field test schedules created developmental problems. With but three full-time staff assigned to preparation, assembly, and evaluation of a complete instructional system, some refinements were necessarily omitted. However, the general plan which the Far West Laboratory for Educational Research and Development utilizes in many, if not most, of its other training development projects was appropriate to this one.

During the course of this project, increasing interest and expressions of need for this training came to the project team's attention. Requests for information, and tentative decisions to utilize the training, were received. Dissemination project staffs in Oregon, Iowa, California, the New England Regional Council on Education, and others have indicated that they desire to use this course.

B. RECOMMENDATIONS

Shaping and refining a newly developed instructional system for a role which itself is both complex and responsive to heightened professional interest requires, as a result, a continuing effort beyond the scope of this project. The recommendations enumerated and discussed below comprise the actions for further development which the project team considers of major significance:

1. Revisions and further elaborations of some components of the course.

The first two training modules (Negotiation and Retrieval) contain, by and large, the core activities in the total EIC role. Higher levels of skills (competency and expertise) are more logically to be sought in these modules. Both trainees and instructors/observers support some additional input here. Development of training on ERIC to include additional "hands-on" activities to achieve higher skill levels is recommended. Secondly, the Evaluation module has in its present structure a minimal amount of interactive elements. Additional exercises here will increase the overall achievement of Evaluation objectives.

2. Increase the training time.

Variations of trainee interests in certain topics, the expressed desire for additional feedback on individual performance, as well as the additional input described above lead to the recommendation to expand from ten sessions to fourteen or fifteen sessions. Trainees observed that discussions could well be extended to the benefit of the learning and the instructors support this change.

3. Develop a more flexible course structure.

Although the five modules are the major structural units, the course as now constituted is programmed on a session-by-session organizational plan. It is recommended that both trainee notebooks and instructor guides have modular rather than session autonomy. The advantage of this recommendation is that special requirements of varying time constraints can be more easily accommodated. Increased flexibility for expanding, contracting and modifying the modular units will result from this revision.

4. Expand and improve the present instructor's material.

Further development and field testing of instructor support materials will improve the quality of the course.

5. Develop a more effective introduction to the new role.

The context in which the EIC functions and the terms and concepts which are elaborated in subsequent training are introduced in the opening session. A vital and informative first impression will set a tone for training and enhance the trainee's interest in a new role, and in a new approach to self-growth and professional service. This increased awareness of the potential of the EIC for contributing to education is the major objective of this session. In order to achieve these ends, and recognizing that few instructors will feel competent to do so, it is recommended that a filmstrip be prepared to assist in introducing the role.

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APPENDIX A

Cognitive Instruments

A-1 Overall Course Diagnostic Exercise, Site #2

A-2 Overall Course Diagnostic Exercise, Site #3

A-3 Negotiation Module Diagnostic Exercise, Site #2

A-4 Retrieval Module Diagnostic Exercise, Site #2

A-5 Transformation Module Diagnostic Exercise, Site #2

A-6 Communication Module Diagnostic Exercise, Site #2

Appendix Item A-1

The Educational Information Consultant: Skills in Disseminating Educational Information

DIAGNOSTIC EXERCISE

This exercise concerns the role and functions of the Educational Information Consultant (EIC). Respond to each question as best as you can applying your present knowledge and experience. Do not be concerned, however, if you can not answer correctly many of the questions. At this point, you are not expected to do so.

The exercise is diagnostic. It is designed primarily to help you identify what is important to learn in this course and, hopefully, to stimulate your interest in developing the skills associated with the role of EIC. The exercise will also help to determine your initial level of knowledge and skill so that the appropriate instruction can be emphasized in subsequent class sessions.

Before you start, look over all the problems so that you can gauge the amount of time you should spend on each set of questions. The exercise takes about one hour to complete.

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DIAGNOSTIC EXERCISE

Problem One

Principal: "Hello, Tom. I'm pleased you can see me on such short notice. I've heard you people in the County Office are on-the-go an awful lot."

Educational Information Consultant: "Well, you said it was important, so I'm glad I could, too."

Principal: "At our last administrative council meeting the discussion got quite emotional over the subject of grading. I was selected to chair a sub-group of six principals to study this topic. At our first meeting the committee suggested I call on you for help. Next Tuesday we meet for the second time.

I could list a dozen undesirable conditions we now foster, but I'm sure you don't want me to take the time, do you?"

1. If you were the Educational Information Consultant, with the job of helping this principal, how would you respond? Below are three possible ways. None are fully sufficient or exactly correct, but circle the one you consider the best answer. Then in the space provided explain why you consider that answer most appropriate and how it could be expanded or improved.

    a. "Yes, I need to know all the details."
    b. "That's not really necessary, I suppose. But tell me, who is behind all this?"
    c. "No doubt they will come out later. For now let's discuss your plans for the meeting."

Comment:

Principal (cont'd): "Well, the students I talked to have told me that two of our strongest scholars have come from a school where no grades are given the way we do, and I want to know where that school is. Can you tell me, Tom?"

2. What would be your response?

    a. "I haven't any idea, but would what they do be of much interest to your teachers?"

b. "Well, have you thought of talking to those students yourself?"
c. "Why do you ask?"

Comment:

Principal (cont'd): "One of our needs is to find out what all our parents, teachers, and students really think about grades, and perhaps changing to a new system. The committee wrote down a few questions we want people to answer. Some say to ask each and every one, but that takes a lot of effort. Others say do a poll of a small representative sample. What way would you suggest?"

3. What is your response?

a. "Either way will have some advantages and some disadvantages."
b. "A few in-depth interviews sound like a good idea to me."
c. "Let's think about that a bit. A hasty decision often is cause for later anguish."

Comment:

Principal (cont'd): "One of the committee says that if we ask parents and students to answer our questions that we might stir up a lot of trouble for ourselves. Do you know how to answer his objection, because we do want to get their views?"

4. What is your response?

a. "Why don't you call the president of your PTA for an opinion?"
b. "There must be some good, sound advice available. I'll check it out."
c. "Have you ever tried such a survey before?"

Comment:

Principal (cont'd): "I want to get every bit of information there is on grading practices to hand out to various members in getting our report together. Can you help me?"

5. What is your response?

   a. "Every bit? That might be nice, but how many hours does your committee have, anyway?"
   b. "By Tuesday? Jerry, you're out of your mind!"
   c. "A tall order, but I'll sure try!"

Comment:

Principal (cont'd): "Well, just the recent stuff, and good stuff! You know what I mean."

6. In the space below indicate how you believe this initial interview should proceed and state what other information you would try to obtain so that you can begin your research for this client's problem.

7. List up to five primary sources you would seek to begin a search on this client's problem.

8. What are some other factors relevant to this client's situation which you might need to consider as you prepare information for him?

9. What do you think would be the most effective way to present your information. (Assume you have about two weeks to prepare.)

Problem Two

(Section 1)

Listed below in items 1-14 are a number of major objectives and functions of libraries and/or information centers. Mixed in with them are some entries that have little or nothing to do with either. Classify each entry by placing the appropriate letter in the blank space, using the following code:

A - Is a major objective or function of libraries but not of information centers.

B - Is a major objective or function of information centers but not of libraries.

C - Is a major objective or function of both libraries and information centers.

D - Is a major objective or function of neither libraries or information cetners.

_____1. Design of new products.

_____2. Storing documents.

_____3. Re-analysis of research findings to correct apprently erroneous conclusions.

_____4. Selective acquisition of documents.

_____5. Retrieval of documents.

_____6. Retrieval of portions of research findings from particular documents.

_____7. Operational field testing of new products.

_____8. Referrals pertaining to location of research documents.

_____9. Maintenance of archives.

____10. Processing of data contained in documents.

____11. Transformation of data to a more communicable form.

____12. Performing tests of statistical significance.

____13. Disseminating specific data from within documents.

____14. Exhaustive (insofar as possible) acquisition of documents.

(Section 2)

Classify each of items 15-32 below according to the extent to which it is an important aspect of the emerging role of the Educational Information Consultant (EIC) by writing the appropriate letter in the blank space. Use the following code:

A - Definitely is central to the EIC role.

B - May be involved in the EIC role, but is not central.

C - Is involved little or not at all in the EIC role.

____15. Administrator

____16. Intermediary

____17. Translator

____18. Group organizer

____19. Facilitator

____20. Teacher

____21. Interpreter

____22. Collector

____23. Service coordinator

____24. Inventor

____25. Locator

____26. Repairer

____27. Analyst

____28. Therapist

____29. Synthesizer

____30. Clarifier

____31. Conciliator

____32. Communicator

(Section 3)

A number of tasks are listed in items 33-49 below. Some should be performed frequently by the EIC or his staff; others should be performed mainly by persons outside of the information center. Place the appropriate letter in the blank space to the left of each item to indicate the extent to which it should be performed by an EIC or his staff, using the following code:

A - Definitely should be performed frequently by an EIC or his staff.

B - Should be performed only rarely by an EIC or his staff.

C - Definitely should NOT be performed by an EIC or his staff.

____33. Help the client clarify his problem.

____34. Identify the original felt need perceived by the client.

____35. Prepare graphs and charts for clients.

____36. Assess the efficiency of client's administrative organization.

____37. Summarize data for client.

____38. Obtain feedback on effectiveness of communications.

____39. Evaluate the performance of client's staff.

____40. Persuade clients to accept and apply particular solutions.

____41. Make judgments in sufficiency tests of adequacy of search.

____42. Help present inservice education for client's staff.

____43. Judge relevance of data to client's needs.

____44. Develop alternative plans for improving information center services.

____45. Supervise initial use of information provided by the center.

____46. Obtain feedback from members of client's organization on effectiveness of solutions found by information center.

____47. Conduct field tests of newly developed products.

____48. Tabulate data on the efficiency of the information center.

____49. Conduct research to develop original solutions to client problems.

(continue on next page)

Problem Three

1. Below are some abbreviations and acronyms widely used in information dissemination. Identify those organizations in the list whose major function is to provide information services. (Put an "X" in the space provided.)

ALA ______
APA ______
ASIS ______
CFSTI ______
CIJE ______
COSATI ______
EDRS ______
ERIC ______
GPO ______
KWIC ______
LC ______
NICEM ______
NSF ______
RIE ______
SLA ______
SRIS ______

2. Which organization likely would prove the most authoritative source for new federal legislation pertaining to education? (Circle the letter of your choice.)

a. COSATI
b. CIJE
c. GPO
d. none of the above

3. To which would you refer for descriptions of instructional films?

a. NSF
b. NICEM
c. LC
d. none of the above

4. To which would you refer for Dissertation Abstracts?

a. APA
b. EDRS
c. KWIC
d. none of the above

5. Which indexes most of the educational magazines?

a. CIJE
b. CFSTI
c. ASIS
d. none of the above

6. From which would you order microfiche prints of research and program development information funded by the U.S.O.E.?

a. ALA
b. EDRS
c. NSF
d. none of the above

Appendix Item A-2

The Educational Information Consultant:
Skills in Disseminating Educational Information

DIAGNOSTIC EXERCISE

This exercise concerns the role and functions of the Educational Information Consultant (EIC). It is a diagnostic exercise, primarily designed to establish a basis for evaluating the initial level of knowledge and skill of the class so that appropriate instruction can be emphasized in subsequent class sessions. It can also be useful in helping you identify what is important for you to learn in the course and, hopefully, in stimulating your interest in developing the skills associated with the role of the EIC.

Allow yourself 45 minutes to complete the exercise. When you begin, look over all the problems so that you can gauge the amount of time you should spend on each set of questions. Pace yourself so that you have time to try all parts. The time allowed should be more than ample. Please do not exceed the time allotted.

This is a procedure for evaluating the course itself, not individual students. Respond to each question as best as you can applying your present knowledge and experience. However, do not consult with others, look up answers, or in any way give a response that you could not give were you doing this exercise under "standard examination conditions."

Remember to bring the completed exercise to Session 2.

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DIAGNOSTIC EXERCISE

Problem One

Principal: "Hello, Tom. I'm pleased you can see me on such short notice. I've heard you people in the County Office are on-the-go an awful lot."

Educational Information Consultant: "Well, you said it was important, so I'm glad I could, too."

Principal: "At our last administrative council meeting the discussion got quite emotional over the subject of grading. I was selected to chair a sub-group of six principals to study this topic. At our first meeting the committee suggested I call on you for help. Next Tuesday we meet for the second time.

I could list a dozen undesirable conditions we now foster, but I'm sure you don't want me to take the time, do you?"

1. If you were the Educational Information Consultant, with the job of helping this principal, how would you respond? Below are three possible ways. None are fully sufficient or exactly correct, but circle the one you consider the best answer. Then in the space provided explain why you consider that answer most appropriate and how it could be expanded or improved.

    a. "Yes, I need to know all the details."
    b. "That's not really necessary, I suppose. But tell me, who is behind all this?"
    c. "No doubt they will come out later. For now let's discuss your plans for the meeting."

Comment:

Principal (cont'd): "Well, the students I talked to have told me that two of our strongest scholars have come from a school where no grades are given the way we do, and I want to know where that school is. Can you tell me, Tom?"

2. What would be your response?

    a. "I haven't any idea, but would what they do be of much interest to your teachers?"

b. "Well, have you thought of talking to those students yourself?"
c. "Why do you ask?"

Comment:

Principal (cont'd): "One of our needs is to find out what all our parents, teachers, and students really think about grades, and perhaps changing to a new system. The committee wrote down a few questions we want people to answer. Some say to ask each and every one, but that takes a lot of effort. Others say do a poll of a small representative sample. What way would you suggest?"

3. What is your response?

    a. "Either way will have some advantages and some disadvantages."
    b. "A few in-depth interviews sound like a good idea to me."
    c. "Let's think about that a bit. A hasty decision often is cause for later anguish."

Comment:

Principal (cont'd): "One of the committee says that if we ask parents and students to answer our questions that we might stir up a lot of trouble for ourselves. Do you know how to answer his objection, because we do want to get their views?"

4. What is your response?

    a. "Why don't you call the president of your PTA for an opinion?"
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    c. "Have you ever tried such a survey before?"

Comment:

Principal (cont'd): "I want to get every bit of information there is on grading practices to hand out to various members in getting our report together. Can you help me?"

5. What is your response?

   a. "Every bit? That might be nice, but how many hours does your committee have, anyway?"
   b. "By Tuesday? Jerry, you're out of your mind!"
   c. "A tall order, but I'll sure try!"

   Comment:

Principal (cont'd): "Well, just the recent stuff, and good stuff! You know what I mean."

6. In the space below indicate how you believe this initial interview should proceed and state what other information you would try to obtain so that you can begin your research for this client's problem.

7. List up to five primary sources you would seek to begin a search on this client's problem.

8. What are some other factors relevant to this client's situation which you might need to consider as you prepare information for him?

9. What do you think would be the most effective way to present your information. (Assume you have about two weeks to prepare.)

Problem Two

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_____3. Re-analysis of research findings to correct apprently erroneous conclusions.

_____4. Selective acquisition of documents.

_____5. Retrieval of documents.

_____6. Retrieval of portions of research findings from particular documents.

_____7. Operational field testing of new products.

_____8. Referrals pertaining to location of research documents.

_____9. Maintenance of archives.

____10. Processing of data contained in documents.

____11. Transformation of data to a more communicable form.

____12. Performing tests of statistical significance.

____13. Disseminating specific data from within documents.

____14. Exhaustive (insofar as possible) acquisition of documents.

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____20. Teacher

____21. Interpreter

____22. Collector

____23. Service coordinator

____24. Inventor

____25. Locator

____26. Repairer

____27. Analyst

____28. Therapist

____29. Synthesizer

____30. Clarifier

____31. Conciliator

____32. Communicator

A number of tasks are listed in items 33-49 below. Some should be performed frequently by the EIC or his staff; others should be performed mainly by persons outside of the information center. Place the appropriate letter in the blank space to the left of each item to indicate the extent to which it should be performed by an EIC or his staff, using the following code:

A - Definitely should be performed frequently by an EIC or his staff.

B - Should be performed only rarely by an EIC or his staff.

C - Definitely should NOT be performed by an EIC or his staff.

____33. Help the client clarify his problem.

____34. Identify the original felt need perceived by the client.

____35. Prepare graphs and charts for clients.

____36. Assess the efficiency of client's administrative organization.

____37. Summarize data for client.

____38. Obtain feedback on effectiveness of communications.

____39. Evaluate the performance of client's staff.

____40. Persuade clients to accept and apply particular solutions.

____41. Apply sufficiency tests to adequacy of search.

____42. Help present inservice education for client's staff.

____43. Judge relevance of data to client's needs.

____44. Develop alternative plans for improving information center services.

____45. Supervise initial use of information provided by the center.

____46. Conduct field tests of newly developed products.

____47. Conduct research to develop original solutions to client problems.

Match the description of a service, function, or agency below with the acronym or initials on the right that represents the description. Connect them with a line to show their correspondence.

Description

48. Issues a directory in 4 or 5 sections under auspices of the National Center for Education Statistics. •

49. Specializes in cataloguing instructional films. •

50. An ordering source for microfiche of results of exemplary programs, research and development efforts, etc., in the national information system for education (ERIC). •

51. The agency focusing on library research and development. •

52. An index to most education periodicals with terms taken from the *Thesaurus of ERIC Descriptors*. •

53. Monthly catalog of abstracts in ERIC. •

Acronym

• ERIC/CLIS

• NICEM

• CIJE

• NSF

• EDRS

• USOE

• RIE

• LC

Appendix Item A-3

NEGOTIATION DIAGNOSTIC EXERCISE

The purpose of this exercise is to establish a learning base upon which to build further skills and competencies in negotiation. In this process, an EIC and client come to an understanding of what the problem is and what service will be rendered.

You are going to listen to a telephone interview between an EIC, whose office is in a county Educational Resources Center, and a client, who is a secondary social studies teacher. It is their second contact. The teacher has formulated her problem more explicitly since her first conversation with the EIC and now wants him to initiate a search. As you listen to the interview, pay attention to the information which the two exchange and to the communication process itself.

There are two parts to this exercise: you will complete Part One during the interview and Part Two after the interview.

Part One: Recording the Interview.

During the interview, you are going to place yourself in the role of the EIC. You will take notes about the client's problem and information needs. To do this, you will need to design an outline form for recording the information. Think of this form as a record of the client's problem and of the service you agreed to provide. It serves as an organized reference you would need later to do a search for information on the client's problem.

Use the carbonized paper provided to write down your outline. (Press firmly so that the outline appears on the two extra copies.) You will now have about ten minutes to prepare your outline. When you have finished, give the third copy to the instructor.

During the interview, fill in the other two copies of your outline. (After the interview, you will keep the original and give the completed copy to the instructor.)

(over)

Part Two: Interview Evaluation

(Take about 20 minutes to complete the questions below.)

1. What types of questions (for example, factual) were used by the EIC during the negotiation interview?

2. Did you detect any errors in the EIC's responses to the client?
   ________ Yes ________ No

   If yes, describe:

3. Summarize the agreement made between the EIC and the client about the course of action to be taken.

4. What are some key terms (descriptors) that the EIC could use to begin his search on this client's problem? List five or more.

89

Name: ______________________________

Appendix Item A-4

EXERCISE FOUR: THE RETRIEVAL PROCESS

There are five major steps involved in the process of Retrieval:

1. Convert Problem into Search Statement
2. Choose Descriptors
3. Develop Search Plan
4. Search Secondary Information Sources
5. Search Primary Information Sources

These steps are usually performed in sequence; when retrieving information on a client's problem, however, an EIC may have to perform some steps simultaneously or even retrace the sequence as he pursues his search. In any case, certain skills and activities can be directly linked with specific steps. Read the list below carefully. In the space provided, indicate whether you think each skill or activity described would be performed during step "1," "2," "3," "4," or "5" of the Retrieval process.

____ Review various search alternatives available.

____ Analyze information about the needs, problems, preferences, and level of sophistication of client.

____ Scan terms in subject headings, indexes, and dictionaries.

____ Review books, periodicals, unpublished studies.

____ List associated keywords.

____ Scan periodical index for match with keywords.

____ Select appropriate location tools.

____ Screen curriculum materials for relevance.

____ Analyze characteristics of resource systems to be utilized.

____ Select 3-4 keywords.

____ Review abstracts and periodical indexes.

____ Prepare a two- or three-sentence summary of client's request.

____ Identify restrictions in client's terminology.

____ Determine level of specificity of information needed.

____ Assess whether basic research report matches problem statement.

____ Retrieve citations to relevant documents.

Name:________________________________

Instructions: Read the client's problem described below and then list, in the space provided, four descriptors which you would use to begin a search for information on the problem.

Problem: The teachers in one of the San Simeon School District's elementary schools want to set up a program whereby upper-grade elementary students would tutor third-grade children who are having difficulty in math, particularly with converting sentence problems to mathematical equations. The teachers want to train upper-grade students in the use of specified tutoring techniques. One of the teachers has therefore requested information which would help them in their review and selection of appropriate student tutoring techniques and tutor-training programs. The teacher also wants some case data from other schools where the tutoring has already been tried for at least one school year.

Suggested Descriptors:

Name:______________________________

Instructions: Read the client's problem described below and then list, in the space provided, four descriptors which you would use to begin a search for information on the problem.

> Problem: An instructor at Peacepipe City College, who teaches a popular course in English composition, has expressed concern that he does not have time to meet individually with his students to discuss their themes. He feels that speaking directly to a student is more satisfactory and personal than writing comments on themes, but he has too many students for this. He has heard about the use of cartridge tape recorders in critiquing and grading student themes and is interested in trying out this technique with his own students. He wants to know if there has been any conclusive research done on this technique and, if so, what the results were. He is particularly interested in student reactions to receiving instructor comments on tape and in instructor evaluations of the effectiveness of the technique, as well as any data on the additional savings on the instructor's time. if any.

Suggested Descriptors:

Appendix Item A-5

TRANSFORMATION EXERCISE

After the EIC has retrieved the relevant information on his client's problem, his next task is to process it for presentation to the client. This process is termed, "Transformation."

Transformation involves analyzing, synthesizing, and organizing the material into a format and style best suited for the client to use in solving his problem. Source documents, such as research reports, must be presented in forms which better meet the needs of school personnel: interpretative summaries, abstracts, annotated bibliographies, summaries of articles, evaluation reports, or combinations of these.

This exercise is designed to help you learn to judge which of the various forms of "transformed" information might best fit a given problem situation of a client. There are two client problems presented; for each one, do the following:

First, read the problem and note the limitations or constraints.

Second, read the list of available information from which the EIC can prepare his report to the client. Decide which of the items should be included in his report (select as many as seem appropriate, given the various constraints).

Then, under the heading, Recommendation, on the attached sheet, write down the items you would select, indicating how you would organize and package them to present to the client. If transformation of any of the items you have selected seems desirable, describe what you would do.

Finally, under the heading, Rationale, tell why you made the recommendation you did, that is, what factors about the client's problem or the available information influenced your selection and handling of the information.

Problem 1

(presented by a secondary social studies teacher)

"Our curriculum revision committee seeks materials, evaluative reports, and planning guidelines for an elective course on Contemporary Social Problems in grade 12. Our students have become apathetic--mostly to the history and civics courses we have been offering. We want to hook into their interests in music, dress, the draft, anti-war activities, pollution of the environment, etc. Mostly we want the students to be active, to learn to apply constructively in real-life situations some of the ideas we are all bombarded with about 'getting involved,' and 'making our community a better place in which to live.'"

Limitations:

The committee wants to study any programs that might now exist, as well as becoming informed on how well they work. The requesting teacher requires findings within two weeks.

Information Available to the EIC:

- One experimental program outlined in detail in ERIC document number ED027743 for grades 8 or 9. The client has a microfiche reader. The program described is not commercially available for purchase or inspection.
- Seventeen professional articles scattered in nine different journals and reports discussing various aspects of such a course and touching on goals, methods, and techniques.
- Names of three nearby districts also introducing a course with generally similar objectives.
- Four recent professional books suggesting ways to individualize instruction in secondary classrooms, including sections on the social studies area.
- Seven popular paperback books on the young, their attitudes, needs, and aspirations.
- Titles and one-sentence descriptions of fourteen educational films on various ecology and environmental problems which can be rented from a nearby college extension media center. However, delivery requires ten days.

Problem 2

(presented by an intermediate teacher)

"A fifth-grade student in my class, who is very intelligent, finishes his classwork quickly, becomes bored for lack of anything to do and is becoming a discipline problem. Other teachers in our school have similar children. We have large classes of heterogeneous ability, with the usual one-third with serious learning problems. These take up too much of my time. Where can I find information to go to the principal with on ways to develop a school or district program for the gifted. We must develop some type of program for these boys and girls, as well as the rest. Three of us teachers have asked to see him early next week. We are going to try to arouse him to do something for a change!"

Limitations:

This teacher wants initial help for his group of teachers within three working days.

Information Available to the EIC:

- A 127-page report of nine successful programs for the gifted. Each program is discussed in detail, and describes how activities are scheduled.
- One entire issue of Instructor magazine is devoted to working with the gifted, mostly enthusiastic teacher accounts of what and how much their gifted students achieved.
- Three professional textbooks on education for the exceptional child, with sections on the gifted in each.
- An NEA 8-page brochure (three years old) listing 25 sources to order on various aspects of teaching the gifted.
- A filmstrip and record left by a book publisher's representative urging the adoption of a gifted curriculum in grades 4-6. Although it sells a particular package of materials it is well done.
- A lengthy study from your district curriculum office on tracking versus homogeneous grouping, with no firm recommendations.

Problem 3

(presented by an Assistant Superintendent for Instruction)

"A teacher was sending home classwork with a student who was to correct the class's work. This thing of sending a class's work home with one student to correct had been mentioned before, but this was the first time it could be found out in the open. The teacher's name was referred to the principal, but nothing was done. We really do not evaluate teachers in this district closely enough. We need a better system of teacher evaluation, particularly in the period before they come up for tenure. Can you locate any systematic, thorough plans for observing, judging, and helping teachers in the various things they do? Then such difficulties as this might be avoidable."

Limitations:

None.

Information Available to the EIC:

- A 90-page report in ERIC (ED031222) on measuring faculty performance. Although directed primarily to the junior college level, large sections are generally applicable to other levels. A 128-item bibliography on measuring teacher characteristics and teacher effectiveness is included.
- Three books are available: 1) A report of a national symposium on evaluation in education, 1969, 355 pages. 2) A professional book by T. M. Stinnett, Professional Problems of Teachers, 1968, 541 pages. 3) NEA Opinions of the Committee on Professional Ethics, 1969, 113 pages.
- Numerous professional articles discussing various facets of evaluating teachers, merit pay for superior teaching, tieing teacher rewards to the achievement of their students, etc.
- Numerous films for teachers covering all aspects of adolescent psychology, subject matter, and teaching methodology.

Problem 4

(presented by a school nurse)

"During the showing of films on human growth to fifth- and sixth-grade students (boys and girls separately), the children were very disrespectful, giggling and laughing to such a degree the presentation had to be discontinued. Children are uncomfortable hearing about their bodies, and have a negative attitude about sex. Yet last week one fourth-grade boy was passing a Playboy magazine to a friend during recess. What causes their behavior in this regard? Can you give me some reading materials on the best way to organize and introduce sex education to these kids? When should the school first introduce such information and who should do it? I'm just the nurse, why don't the teachers do anything about sex education? I am going to take up this idea with our school's PTA club next Tuesday. Give me anything you can find that will help me put this across.

Limitations:

You have one day to find and organize the material for this client.

Information Available to the EIC:

- Numerous films to be rented on all animal species including man, covering physiology, anatomy, life cycle, reproduction, family life, etc.
- Three marriage and sex films appropriate for this age group.
- The full description of one complete sex education program, already the subject of great controversy, published by the SIECUS project group, which begins in kindergarten and extends through grade 12. The sample teacher manual for grade 7 is available.
- Three publishers' catalogs listing readings, stories, and discussion guides for conducting sex education as an additional part of the regular instruction in health and hygiene. Each claims that the information is non-controversial.
- A newspaper file of controversy introducing sex education into the public schools. Some school district successes and some failures are analyzed.
- Three professional journal articles describing how different communities successfully introduced the SIECUS materials.
- One article describing how SIECUS materials were rejected in five districts after trial of one year.

Name____________________________________

Problem Number________________________

TRANSFORMATION EXERCISE ANSWER SHEET

Recommendation:

Rationale:

Appendix Item A-6

COMMUNICATION EXERCISE

The concluding communication between the EIC and client, when the package of transformed "findings" or "results" of a search is conveyed, may be verbal or written. Sometimes, the client will come in person to see and discuss the package with the EIC. Naturally, such a personalized exchange may contribute substantially to the client's full and effective use of the information.

Frequently, however, the package of transformed information will have to be sent by mail or delivered to the client, without opportunity for discussion. In such cases, the EIC should insert a cover letter, explaining the package he is transmitting to the client. This letter of transmittal must, in effect, substitute for a person-to-person communication about the package and its contents. In the exercise you are about to do, you will simulate a situation in which communication between the EIC and client must be by mail.

Instructions: Select one of the two problems from the Transformation Exercise you just completed. Consider the contents of the "package" of transformed information which you would have prepared for the client. Now, compose a one-page letter transmitting to the client the package you planned. In the letter, make up a name for the client and tell him whatever you think he needs to know in order to use the package most effectively.

APPENDIX B

Affective Instruments

- B-1 Overall Course Affective Evaluation Form
- B-2 Negotiation Module Affective Evaluation Form
- B-3 Retrieval Module Affective Evaluation Form
- B-4 Transformation/Communication Modules Affective Evaluation Form
- B-5 Evaluation Module Affective Evaluation Form

Appendix Item B-1

THE EDUCATIONAL INFORMATION CONSULTANT: SKILLS IN DISSEMINATING EDUCATIONAL INFORMATION

Questionnaire: Sessions 1-10

1. What is your highest academic degree? ____________________

2. Are you presently studying for a degree? ______Yes ______No
   If "Yes," please specify: ____________________

3. What is your present occupation? ______________________________

4. Do you consider that the job you now hold (or are working toward) would require you to use the skills you've learned in this course? Circle one:
   Definitely yes   Likely   Maybe   Probably not   Definitely not

5. How personally useful do you feel the subject matter covered in this course will be to you? Circle one:
   Very useful   Quite useful   Somewhat useful   Only fairly useful   Not at all useful

6. If you circled "Not at all useful" or "Only fairly useful" in 5 above, please indicate how you think the course could have been made more useful.

7. How did you enjoy this course? Circle one:
   Very much   Fairly much   It was OK   Not too much   Not at all

8. What, if anything, did you particularly like about this course?

9. What, if anything, did you particularly not like about this course?

10. What experience, if any, did you particularly value in taking this course?

11. After reading each of the items below, please circle the number which most nearly corresponds with your opinion.

	Definitely No			Not Sure		Definitely Yes	
a. This course helped me to clarify my career plans.	1	2	3	4	5	6	7
b. I would like to take this kind of course again.	1	2	3	4	5	6	7
c. I am very satisfied with this course.	1	2	3	4	5	6	7
d. I am now quite excited about the field of educational information dissemination.	1	2	3	4	5	6	7
e. I would recommend that others take this course.	1	2	3	4	5	6	7

12. For each of the following items, please circle the number which most nearly corresponds now with your feelings upon completing this course.

a. The relevance of the training in this course to you in your present position.	Low relevance		Some relevance			High relevance	
	1	2	3	4	5	6	7
b. The relevance of the training in this course to you in your future position.	Low relevance		Some relevance			High relevance	
	1	2	3	4	5	6	7
c. The value of this training in comparison to other training you have received in college or university courses.	Much less value		About the same			Much more value	
	1	2	3	4	5	6	7
d. Your interest in taking more advanced courses in this field.	No interest		Some interest			High interest	
	1	2	3	4	5	6	7

13. In which of the five modules of the course--Negotiation, Retrieval, Transformation, Communication, or Evaluation--do you now feel you:

    a. Learned the most? ____________________

    Why?

    b. Learned the least? ____________________

    Why?

c. Liked the best? ____________________

Why?

d. Liked the least? ____________________

Why?

14. Please list below any suggestions or comments you have concerning the improvement of any aspect of the course, such as suggestions for improving instruction; use of simulation role-playing activities or exercises; additional readings; etc.

Appendix Item B-2

THE EDUCATIONAL INFORMATION CONSULTANT:
SKILLS IN DISSEMINATING EDUCATIONAL INFORMATION

Questionnaire: Sessions 1-3

Your evaluation of this course is important in determining what needs to be changed and in what ways. Please evaluate the part of the course covered in the first three sessions.

After reading each of the items below, please circle the number which most nearly corresponds with your opinion. The seven points of the scale to be used are described here for your reference:

Not at all	Minimally	To a small degree	To some degree	Moderately	Very much so	A great deal
1	2	3	4	5	6	7

		Not at all		To a small degree				A great deal
1.	To what extent do you feel the instructor presentation and discussion in the first session helped you to understand the emerging role of the EIC?	1	2	3	4	5	6	7
2.	To what extent did you find helpful the exercise on the model negotiation interview (on tape) in Session 2?	1	2	3	4	5	6	7
3.	To what extent did you find it helpful to repeat the exercise on the model negotiation interview (on tape)?	1	2	3	4	5	6	7
4.	To what extent were the instructions for the role you played in the negotiation game in Session 2 adequate?	1	2	3	4	5	6	7
5.	In that game, to what extent did your playing of the (client, EIC, or observer) role help you to understand the negotiation process?	1	2	3	4	5	6	7
6.	To what extent was the discussion of negotiation skills and techniques in Session 3 helpful?	1	2	3	4	5	6	7
7.	To what extent did playing the role of the client in the Negotiation Exercise in Session 3 (when you presented your own problem to another student) help you learn to be an EIC?	1	2	3	4	5	6	7
8.	To what extent did playing the role of the observer in that exercise in Session 3 help you learn to be an EIC?	1	2	3	4	5	6	7

Not at all 1	Minimally 2	To a small degree 3	To some degree 4	Moderately 5	Very much so 6	A great deal 7

	Not at all		To a small degree				A great deal
9. To what extent did this training module, as a whole, make clear to you the problems, techniques, and needs associated with the negotiation process?	1	2	3	4	5	6	7
10. To what extent do you feel now that the sessions on negotiation were sufficiently complete for you to move on to another topic?	1	2	3	4	5	6	7
11. In your opinion, how essential is the process of negotiating the question with the client to the effective performance of the EIC role?	1	2	3	4	5	6	7
12. To what extent do you feel the outside assignments were adequate for helping you to prepare for the:							
a. second class session?	1	2	3	4	5	6	7
b. third class session?	1	2	3	4	5	6	7

13. How much time did you spend on the outside assignment for:

a. Session 2__________________ b. Session 3___________________

14. What in your opinion was the most useful element of the training on negotiation skills?

15. What in your opinion was the least useful element in the training on negotiation skills?

16. Would you care to describe your feelings--whether positive, neutral, or negative--about the training up to this point?

Appendix Item B-3

THE EDUCATIONAL INFORMATION CONSULTANT:
SKILLS IN DISSEMINATING EDUCATIONAL INFORMATION

Questionnaire: Sessions 4-5

Your evaluation of this course is important in determining what needs to be changed and in what ways. Please evaluate the part of the course covered in Sessions 4 and 5.

After reading each of the items below, please circle the number which most nearly corresponds with your opinion. The seven points of the scale to be used are described here for your reference:

Not at all	Minimally	To a small degree	To some degree	Moderately	Very much so	A great deal
1	2	3	4	5	6	7

	Not at all			To some degree			A great deal
1. To what extent did the Retrieval Exercise (in the beginning of Session 4 last week) contribute to your understanding of the retrieval process?	1	2	3	4	5	6	7
2. To what extent did you find it helpful to repeat that exercise in Session 5?	1	2	3	4	5	6	7
3. To what extent did you find the instructor's presentation on the search strategy and the "Bibliographic Chain" (in Session 4) helpful?	1	2	3	4	5	6	7
4. To what extent did the small-group brainstorming activity in Session 4 enable you to:							
a. clarify your understanding of your client's problem ?	1	2	3	4	5	6	7
b. identify more descriptors related to your client's problem?	1	2	3	4	5	6	7
5. To what extent did working with the Search Procedure Form contribute to your understanding of:							
a. the retrieval process?	1	2	3	4	5	6	7
b. your own search behavior?	1	2	3	4	5	6	7

Not at all	Minimally	To a small degree	To some degree	Moderately	Very much so	A great deal
1	2	3	4	5	6	7

	Not at all			To some degree			A great deal
6. To what extent did you find it helpful to consult resources (CIJE, RIE, and Education Index) in Session 4?	1	2	3	4	5	6	7
7. To what extent did you find the following presentations informative:							
a. the film, "How to Use ERIC"?	1	2	3	4	5	6	7
b. the film, "Spires and Ballots"?	1	2	3	4	5	6	7
c. the slides and tape on ERIC DIALOG?	1	2	3	4	5	6	7
8. To what extent did participating in the group discussion of search procedure (in Session 5) help you reformulate your statement of your client's problem?	1	2	3	4	5	6	7
9. To what extent did the following parts of the preparations for Sessions 4 and 5 contribute to your understanding of the retrieval process:							
a. Abbreviations Exercise?	1	2	3	4	5	6	7
b. the reading, "The Search Strategy"?	1	2	3	4	5	6	7
c. the reading, "Processing the Center's Collection"?	1	2	3	4	5	6	7
d. Guide to Educational Resources?	1	2	3	4	5	6	7
e. ERIC Information Packet?	1	2	3	4	5	6	7
f. Exercise Five: "Making Relevance Judgments"?	1	2	3	4	5	6	7

10. How much time did you spend on the outside assignment for:

a. Session 4 ________________ b. Session 5 ____________________

Not at all	Minimally	To a small degree	To some degree	Moderately	Very much so	A great deal
1	2	3	4	5	6	7

	Not at all			To some degree			A great deal
11. In your opinion, how directly pertinent is the retrieval process to the EIC role?	1	2	3	4	5	6	7
12. What, in your opinion, was the most useful element in the training on retrieval skills?							
13. What, in your opinion, was the least useful element in the training on retrieval skills?							
14. To what extent do you feel now that the two sessions on retrieval were sufficiently complete for you to move on to the next topic?	1	2	3	4	5	6	7

Please list below any comments or suggestions you have concerning the improvement of any aspect of the fourth and fifth class sessions of this course.

Appendix Item B-4

THE EDUCATIONAL INFORMATION CONSULTANT: SKILLS IN DISSEMINATING EDUCATIONAL INFORMATION

Questionnaire: Sessions 6-8

Your evaluation of this course is important in determining what needs to be changed and in what ways. Please evaluate the part of the course covered in Sessions 6, 7, and 8.

After reading each of the items below, please circle the number which most nearly corresponds with your opinion. The seven points of the scale to be used are described here for your reference:

Not at all	Minimally	To a small degree	To some degree	Moderately	Very much so	A great deal
1	2	3	4	5	6	7

	Not at all			To some degree			A great deal
1. To what extent did the exercise in which you had to select and organize given information for two hypothetical problems (the Transformation Exercise) increase:							
a. your skill in transforming information?	1	2	3	4	5	6	7
b. your knowledge of the skills involved in transforming information?	1	2	3	4	5	6	7
2. To what extent did you find it helpful to repeat this exercise in Session 7?	1	2	3	4	5	6	7
3. Was the display and discussion of different types of "transformed" information in Session 6 informative?	1	2	3	4	5	6	7
4. To what extent were the Transformation Guidelines and Transformation Checklist helpful? (Look them up if you can't recall what they are.)	1	2	3	4	5	6	7
5. To what extent were the Abstracting Guidelines helpful?	1	2	3	4	5	6	7
6. Did the group planning and role-playing in Session 7 contribute to your understanding of communicating with a client?	1	2	3	4	5	6	7

Not at all	Minimally	To a small degree	To some degree	Moderately	Very much so	A great deal
1	2	3	4	5	6	7

	Not at all			To some degree			A great deal
7. To what extent were the Guidelines for Conveying the Information Package helpful?	1	2	3	4	5	6	7
8. Was the EIC/Client Communication Checklist:							
a. helpful in extending your understanding of the communication process?	1	2	3	4	5	6	7
b. adequate for providing appropriate feedback to the EIC about his communication skills?	1	2	3	4	5	6	7
c. easy to use?	1	2	3	4	5	6	7
9. Do you now feel that the simulation of the EIC role which you did for your student-client helped build your skills?	1	2	3	4	5	6	7
10. In your opinion, how directly pertinent is the communication process to the EIC role?	1	2	3	4	5	6	7
11. To what extent do you feel now that the three sessions on transformation and communication were sufficiently complete for you to move on to the next topic?	1	2	3	4	5	6	7

12. How much time did you spend on the outside assignment for:

a. Session 6_________ b. Session 7_________ c. Session 8_________

13. To what extent do you feel the amount of time required for the outside assignments for the course to date is appropriate?	1	2	3	4	5	6	7

14. What in your opinion was the most useful element of the training on transformation/communication skills?

15. What in your opinion was the least useful element in the training on transformation/communication skills?

16. Comments or suggestions:

Appendix Item B-5

THE EDUCATIONAL INFORMATION CONSULTANT: SKILLS IN DISSEMINATING EDUCATIONAL INFORMATION

Questionnaire: Sessions 9 and 10

Your evaluation of this course is important in determining what needs to be changed and in what ways. Please evaluate the part of the course covered in sessions 9 and 10.

After reading each of the items below, please circle the number which most nearly corresponds with your opinion. The seven points of the scale to be used are described here for your reference:

Not at all	Minimally	To a small degree	To some degree	Moderately	Very much so	A great deal
1	2	3	4	5	6	7

	Not at all			To some degree			A great deal
1. Did the discussion of evaluation in Session 9 contribute to your understanding of how to assess processes which the EIC performs?	1	2	3	4	5	6	7
2. Did the instructor's presentation in Session 9 contribute to your understanding of the evaluation process?	1	2	3	4	5	6	7
3. If you visited an Information Center, did the visit increase your understanding of the EIC's role?	1	2	3	4	5	6	7
4. Did the reports of visits to Information Centers increase your understanding of the various settings in which an EIC may function?	1	2	3	4	5	6	7
5. In Session 9, did meeting in teams to receive feedback from observers and client on the communication exercise help you understand how to evaluate the EIC's performance?	1	2	3	4	5	6	7
6. In your opinion, how directly pertinent is the evaluation process to the EIC role?	1	2	3	4	5	6	7
7. To what extent did reading "The Information Analysis Center and the Library" help you to understand the EIC role?	1	2	3	4	5	6	7

8. Comments or suggestions: (Please use other side, if necessary.)

APPENDIX C

Results of Pretest/Posttest Comparisons for Site #2

C-1 Cognitive Test Results, Negotiation Module, Part #1
C-2 Cognitive Test Results, Negotiation Module, Part #2
C-3 Cognitive Test Results, Retrieval Module
C-4 Cognitive Test Results, Communication Module
C-5 Affective Test Results, Negotiation Module
C-6 Affective Test Results, Retrieval Module
C-7 Affective Test Results, Transformation/Communication Module
C-8 Affective Test Results, Evaluation Module

TABLE C-1

Results of Pretest/Posttest Comparisons of Subjectively Scored Items in the Negotiation Module for Site #2

		PRETEST					POSTTEST							
	N	Mean	95% Confidence Interval	SEM	r	% Agreement	Mean	95% Confidence Interval	SEM	r	% Agreement	t	P*	Omega Squared
Criterion 1:														
Rater W	14	1.42	1.12-1.72	.17		36%	1.78	1.59-1.97	.11		71%	2.11	<.05	.11
Rater M	14	1.00	.75-1.25	.14			1.64	1.36-1.92	.16			3.20	<.005	.25
Criterion 2:														
Rater W	14	.78	.46-1.10	.18		43%	1.64	1.36-1.92	.16		57%	3.58	<.005	.30
Rater M	14	.50	.20- .80	.17			1.14	.68-1.60	.26			2.66	<.01	.18
Criterion 3:														
Rater W	14	1.21	.89-1.53	.18		43%	1.71	1.43-1.99	.16		64%	2.27	<.025	.13
Rater M	14	.50	.27- .73	.13			1.28	.91-1.65	.21			3.54	<.005	.29
Criterion 4:														
Rater W	14	.21	.02- .40	.11		86%	1.57	1.22-1.92	.20		86%	8.00	<.005	.69
Rater M	14	.07	.00- .18	.06			1.42	1.07-1.77	.20			7.94	<.005	.69
Criterion 5:														
Rater W	14	.78	.46-1.10	.18		64%	1.85	1.60-2.10	.14		79%	4.86	<.005	.45
Rater M	14	.42	.12- .72	.17			1.64	1.36-1.92	.16			7.17	<.005	.64
Criterion 6:														
Rater W	14	.35	.01- .69	.19		57%	1.28	.94-1.62	.19		86%	5.47	<.005	.51
Rater M	14	.50	.27- .73	.13			1.28	.91-1.65	.21			5.57	<.005	.52
Total 1-5:														
Rater W	14	4.42	3.52-5.32	.51	.71	21%	8.57	7.58-9.56	.56	.74	43%	6.19	<.005	.57
Rater M	14	2.50	1.77-3.23	.41			7.14	5.60-8.68	.87			6.10	<.005	.56

*One-tailed test.

TABLE C-2

Results of the Pretest/Posttest Comparisons of Subjectively Scored Items for the Negotiation Module, Part Two, for Site #2

		PRETEST					POSTTEST							
	N	Mean	95% Confidence Interval	SEM	r	% Agreement	Mean	95% Confidence Interval	SEM	r	% Agreement	t	P*	Omega Squared
Item 1:														
Rater W	17	1.64	1.22-2.06	.20	.70	65%	2.82	2.25-3.39	.27	.92	70%	4.21	<.005	.33
Rater N	17	1.52	1.16-1.88	.17			2.52	1.91-3.13	.29			3.03	<.005	.19
Item 2a: Objectively Scored	17	.41	.16- .66	.12			.58	.33- .83	.12			1.21	N.S.	.01
Item 2b:														
Rater W	17	.35	.05- .65	.14	.68	76%	.70	.36-1.04	.16	.71	41%	1.75	<.05	.06
Rater N	17	.11	.00- .28	.08			.11	.00- .28	.08			.00	N.S.	.00
Item 3:														
Rater W	17	2.88	2.16-3.60	.34	.53	24%	4.05	3.63-4.47	.20	.25	12%	3.90	<.005	.29
Rater N	17	1.82	1.23-2.41	.28			2.23	1.81-2.65	.20			1.24	N.S.	.02
Item 4:														
Rater W	17	2.29	1.80-2.78	.23	.61	41%	2.35	1.97-2.73	.18	.55	41%	.23	N.S.	.00
Rater N	17	1.88	1.52-2.24	.17			1.82	1.46-2.18	.17			.27	N.S.	.00
Total:														
Rater W	17	7.52	6.29-8.75	.58	.59		10.52	9.59-11.45	.44	.76		5.00	<.005	.41
Rater N	17	5.76	5.06-6.46	.33			7.29	6.29-8.29	.47			2.83	<.01	.17

*One-tailed test.

TABLE C-3

Results of the Pretest/Posttest Comparisons
in the Retrieval Module for Site #2

		PRETEST					POSTTEST							
	N	Mean	95% Confidence Interval	SEM	r	% Agreement	Mean	95% Confidence Interval	SEM	r	% Agreement	t	P*	Omega Squared
						Objectively Scored								
PART 1:	14	9.00	7.58-10.42	.80			10.78	9.31-12.25	.83			2.91	<.01	.21
						Subjectively Scored								
PART 2:														
Rater N	12	1.67	1.18- 2.16	.27	.66	25%	2.17	1.83- 2.51	.19	.46	50%	1.45	N.S.	.04
Rater M	12	2.33	1.68- 2.98	.36			2.25	1.78- 2.72	.26			--	N.S.	--

*One-tailed test.

TABLE C-4

Results of Pretest/Posttest Comparisons of Subjectively Scored Items in the Communication Module for Site #2

		PRETEST					POSTTEST							
	N	Mean	95% Confidence Interval	SEM	r	% Agree-ment	Mean	95% Confidence Interval	SEM	r	% Agree-ment	t	P*	Omega Squared
Criterion 1:														
Rater W	15	2.20	1.75-2.65	.21	.81	73%	2.66	2.27-3.05	.18		73%	2.09	<.050	.10
Rater N	15	2.60	2.21-2.99	.18			2.93	2.78-3.08	.07			2.35	<.025	.13
Criterion 2:														
Rater W	15	.40	.12- .68	.13		40%	2.26	1.75-2.77	.24	.74	53%	8.45	<.005	.70
Rater N	15	.80	.35-1.25	.21			2.46	1.97-2.95	.23			5.92	<.005	.53
Criterion 3:														
Rater W	15	1.46	.80-2.12	.30	.40	27%	2.20	1.52-2.88	.32		73%	1.94	<.050	.08
Rater N	15	1.73	1.26-2.20	.22			2.46	1.86-3.06	.28			2.02	<.050	.09
Criterion 4:														
Rater W	15	.73	.30-1.16	.20		40%	2.06	1.50-2.62	.26	.77	73%	4.75	<.005	.42
Rater N	15	.06	.00- .19	.06			2.26	1.75-2.77	.24			9.16	<.005	.73
Criterion 5:														
Rater W	15	1.13	.57-1.69	.26	.64	53%	2.40	1.84-2.96	.26		53%	3.43	<.005	.26
Rater N	15	1.13	.64-1.62	.23			2.40	1.86-2.94	.25			4.23	<.005	.36
Criterion 6:														
Rater W	15	.33	.00- .76	.20		60%	2.00	1.27-2.73	.34	.64	53%	4.91	<.005	.44
Rater N	15	.26	.02- .50	.11			1.33	.58-2.08	.35			2.97	<.010	.21
Criterion 7:														
Rater W	15	.86	.45-1.27	.19		47%	2.66	2.17-3.15	.23		80%	6.42	<.005	.57
Rater N	15	.53	.19- .87	.16			2.60	2.21-2.99	.18			9.40	<.005	.74

*One-tailed test.

TABLE C-4 (continued)

Results of Pretest/Posttest Comparisons of Subjectively Scored Items in the Communication Module for Site #2

		PRETEST					POSTTEST							
	N	Mean	95% Confidence Interval	SEM	r	% Agree-ment	Mean	95% Confidence Interval	SEM	r	% Agree-ment	t	P	Omega Squared
Criterion 8:														
Rater W	15	1.13	.40-1.86	.34	.61	47%	2.40	1.80-3.00	.28		87%	3.17	<.005	.23
Rater N	15	1.46	.86-2.06	.28			2.40	1.74-3.06	.31			3.13	<.005	.23
Criterion 9:														
Rater W	15	1.26	1.00-1.52	.12		60%	2.20	1.69-2.71	.24		67%	4.27	<.005	.36
Rater N	15	1.26	1.00-1.52	.12			2.53	2.12-2.94	.19			6.35	<.005	.57
Sum of Criteria 1-8:														
Rater W	15	8.26	6.25-10.27	.94	.30		18.60	15.80-21.40	1.31	.71		6.22	<.005	.56
Rater N	15	8.53	7.22-9.84	.61			18.93	16.73-21.13	1.03			8.45	<.005	.70

TABLE C-5

Results for Affective Questionnaire

Site 02
Sessions 1 - 3 (Negotiation)

ITEM	Mean	N	Achieved Standard
1. To what extent do you feel the instructor presentation and discussion in the first session helped you to understand the emerging role of the EIC?	3.73	15	no
2. To what extent did you find helpful the exercise on the model negotiation intervew (on tape) in Session 2?	4.18	17	no
3. To what extent did you find it helpful to repeat the exercise on the model negotiation interview (on tape)?	5.29	17	yes
4. To what extent were the instructions for the role you played in the negotiation game in Session 2 adequate?	4.12	17	no
5. In that game, to what extent did your playing of the (Client, EIC, or Observer) role help you to understand the negotiation process?	5.00	17	yes
6. To what extent do you feel the outside assignments prepared you for the:			
a. second class session?	4.12	17	no
b. third class session?	5.00	15	yes
7. To what extent was the discussion of negotiation skills and techniques in Session 3 helpful?	4.94	16	yes
8. To what extent did playing the role of the Client in the negotiation exercise in Session 3 (when you presented your own problem to another student) help you learn to be an EIC?	5.59	17	yes
9. To what extent did playing the role of the Observer in that exercise in Session 3 help you learn to be an EIC?	5.41	17	yes
10. To what extent did this unit, as a whole, make clear to you the problems, techniques, and needs associated with the negotiation process?	5.24	17	yes
11. To what extent do you feel now that the sessions on negotiation were sufficiently complete for you to move on to another topic?	4.47	17	yes

TABLE C-6

Results for Affective Questionnaire

Site 02
Sessions 4 - 5 (Retrieval)

ITEM	Mean	N	Achieved Standard
1. To what extent did you find the presentation on resources in the college library helpful?	6.00	13	yes
2. To what extent did Exercise Four (in the beginning of Session 4 last week) contribute to your understanding of the retrieval process?	4.50	12	yes
3. To what extent did you find it helpful to repeat the exercise in Session 5?	4.33	12	no
4. To what extent did you find it helpful to work with the Search Procedure Form in Session 4?	4.61	13	yes
5. To what extent did the small-group brainstorming activity in Session 4 enable you to:			
a. identify more descriptors related to your client's problem?	5.50	12	yes
b. learn to formulate a concise statement of your client's problem?	4.36	11	no
c. check your EIC's understanding of your problem?	5.00	11	yes
6. To what extent did you reformulate your statement of your client's problem after participating in the group brainstorming activity?	3.75	12	no
7. To what extent did you find the instructor's presentation on search strategy (in Session 4) helpful?	4.70	10	yes
8. To what extent did you find it helpful to use a Guide to Educational Resources:			
a. in class (Session 4)?	4.50	10	yes
b. for planning the search on your client's problem?	4.11	9	no
c. as a general reference?	5.00	9	yes
9. To what extent did you find it helpful to consult resources (CIJE, RIE, and Education Index) in class (in Session 4)?	4.10	10	no

TABLE C-6 (continued)

Results for Affective Questionnaire

Site 02
Sessions 4 - 5 (Retrieval)

ITEM	Mean	N	Achieved Standard
10. To what extent did the following parts of the Preparation for Session 5 contribute to your understanding of the retrieval process:			
a. ERIC Information Packet?	5.09	11	yes
b. Exercise Five: "Making Relevance Judgments"?	4.90	11	yes
c. the reading, "Processing the Center's Collection"?	4.45	11	no
d. Exercise Six: Abbreviations?	4.81	11	yes
11. To what extent did you find the filmstrip, "How to Use ERIC," (in Session 5) informative?	4.63	11	yes
12. To what extent did you find the filmstrip on ERIC DIALOG (in Session 5) informative?	4.63	11	yes
13. To what extent did you find the presentation on ALERT (in Session 5) helpful?	5.54	11	yes
14. To what extent do you feel now that the two sessions on retrieval were sufficiently complete for you to move on to the next topic?	4.63	11	yes

TABLE C-7

Results for Affective Questionnaire

Site 02

Sessions 6 - 8 (Transformation/Communication)

ITEM	Mean	N	Achieved Standard
1. To what extent did the exercise in which you had to select and organize given information for two hypothetical problems (the Transformation Exercise) increase:			
a. your skill in transforming information?	3.86	14	no
b. your knowledge of the skills involved in transforming information?	4.40	15	no
2. To what extent did you find it helpful to repeat this exercise in Session 7?	5.15	13	yes
3. Was the display and discussion of different types of "transformed" information in Session 6 informative?	4.83	12	yes
4. To what extent were the Transformation Guidelines and Transformation Checklist helpful? (Look them up if you can't recall what they are.)	5.42	12	yes
5. To what extent were the Abstracting Guidelines helpful?	5.43	14	yes
6. Did the group planning and role-playing in Session 7 contribute to your understanding of communicating with a client?	5.47	15	yes
7. To what extent were the Guidelines for Conveying the Information Package helpful?	5.64	14	yes
8. Was the EIC/Client Communication Checklist:			
a. helpful in extending your understanding of the communication process?	5.80	15	yes
b. adequate for providing appropriate feedback to the EIC about his communication skills?	5.47	15	yes
c. easy to use?	5.93	14	yes
9. Do you now feel that the simulation of the EIC role which you did for your student-client helped build your skills?	5.93	14	yes
10. In your opinion, how directly pertinent is the communication process to the EIC role?	6.87	15	yes
11. To what extent do you feel now that the three sessions on transformation and communication were sufficiently complete for you to move on to the next topic?	5.23	13	yes

TABLE C-8

Results for Affective Questionnaire

Site 02

Sessions 9 - 10 (Evaluation)

ITEM	Mean	N	Achieved Standard
1. Did the discussion of evaluation in Session 9 contribute to your understanding of how to assess processes which the EIC performs?	5.20	15	yes
2. Did the instructor's presentation in Session 9 contribute to your understanding of the evaluation process?	5.27	15	yes
3. If you visited an Information Center, did the visit increase your understanding of the EIC's role?	5.23	13	yes
4. Did the reports of visits to Information Centers increase your understanding of the various settings in which an EIC may function?	5.36	14	yes
5. In Session 9, did meeting in teams to receive feedback from observers and client on the communication exercise help you understand how to evaluate the EIC's performance?	4.93	14	yes
6. In your opinion, how directly pertinent is the evaluation process to the EIC role?	6.00	16	yes
7. To what extent did reading "The Information Analysis Center and the Library" help you to understand the EIC role?	4.06	16	no